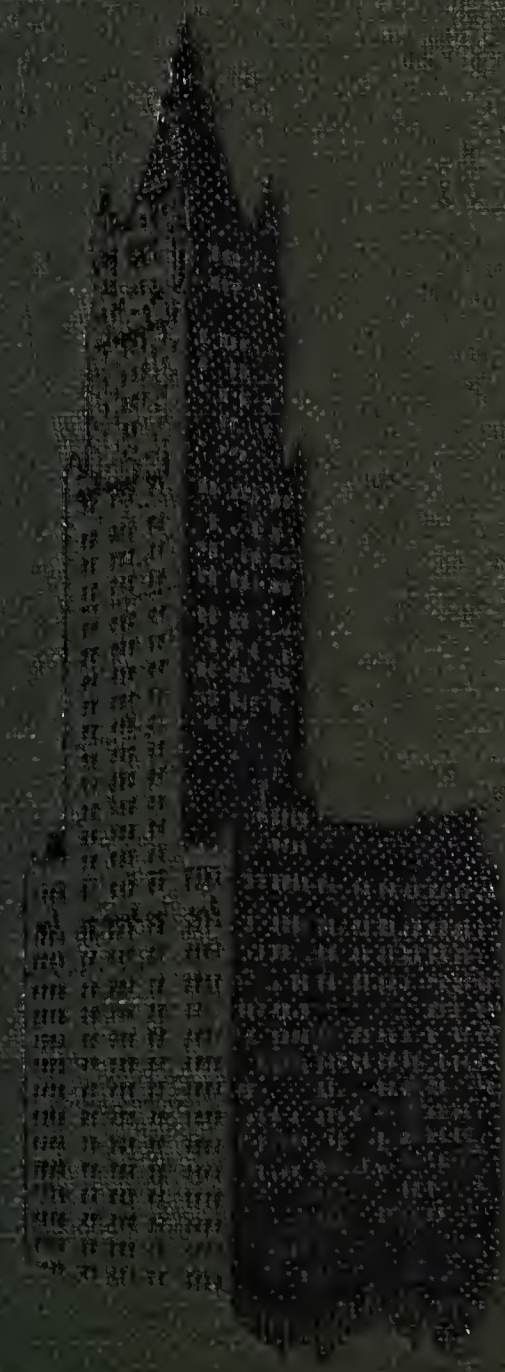
METROPOLITAN NEW YORK

Its Geography, History and Civics

CORNISH
and
GRIFFIN



METROPOLITAN NEW YORK

Its Geography, History and Civics

BY

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PREFACE

This book about Metropolitan New York is an attempt to give an account of the life, growth, and development of New York City and the district that comprises the metropolitan area.

Geographical conditions have favored the development of a densely populated area round about New York Bay. With the growth of population many vital questions have presented themselves for settlement.

The development of the harbor to meet the needs of the shipping; the care of the railroad traffic; providing for the movement of vast numbers of people to and from work; housing and feeding the great population; caring for recreational and educational needs; taking care of the sick; protecting the city against fire; giving the people police protection; and planning for the future are but a few of the many questions that the authorities of the metropolitan area are called upon to settle. These matters are given as full treatment as a book of this size permits.

Throughout the book the very close relationship of the city and the suburban area has been borne in mind. To think of one without the other is to miss a vital affair in the life of the people of the district discussed.

Life in New York has been stressed but only because of the relationship of the great city to the other communities of the region.

Geography, history, and the daily life of the people are intimately related. This fact has led the authors to include the different types of materials that appear in this book.

The collection of material and pictures has led to many calls on city officials, officers of Boards of Trade and various societies in New York City. All requests have been courteously received and material and advice have been freely given. The authors thank all who have so generously given their assistance in making this book possible.

J. T. G., H. R. C.

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Statue of Liberty.

METROPOLITAN NEW YORK

CHAPTER I

The Metropolitan Area

Entering New York City.—A passenger from the West on a train bound for New York City was seen to arise, put on his overcoat, and make all plans for leaving the train. Other passengers seemed to be in no hurry; they continued to read their papers or to visit with their neighbors as usual. They knew there was more than twenty miles to travel before reaching the city station. The first passenger was a stranger going to the city for the first time. Why do you suppose he thought he had reached the city so long before he actually arrived there?

The Country and the City.—In the early stages of his journey the towns were few and far apart.

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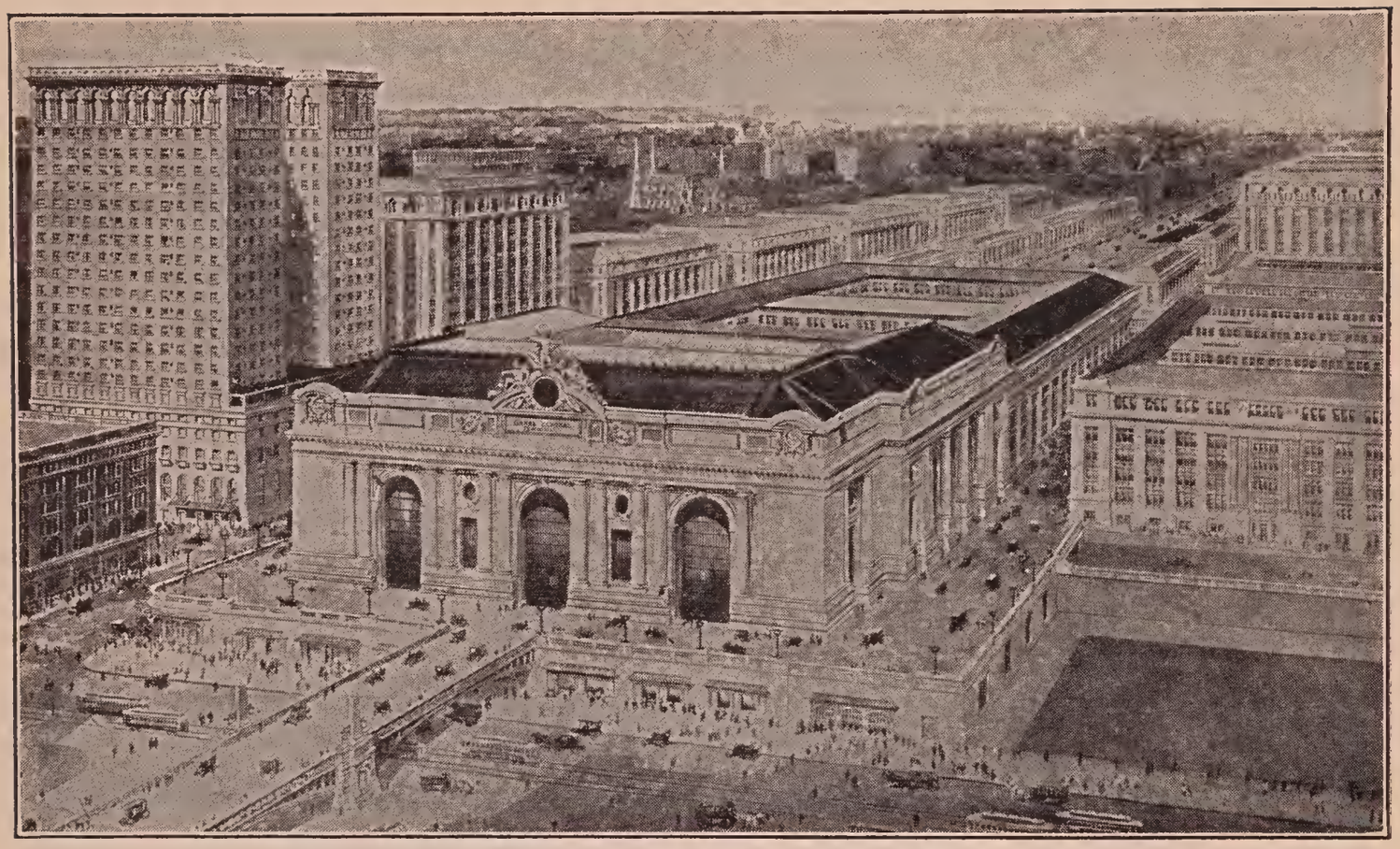
An eighteen hour train between New York and Chicago.

They were not busy towns like the ones that he saw near the large city. Few passengers left the train in the country towns, and in some cases but three or four new



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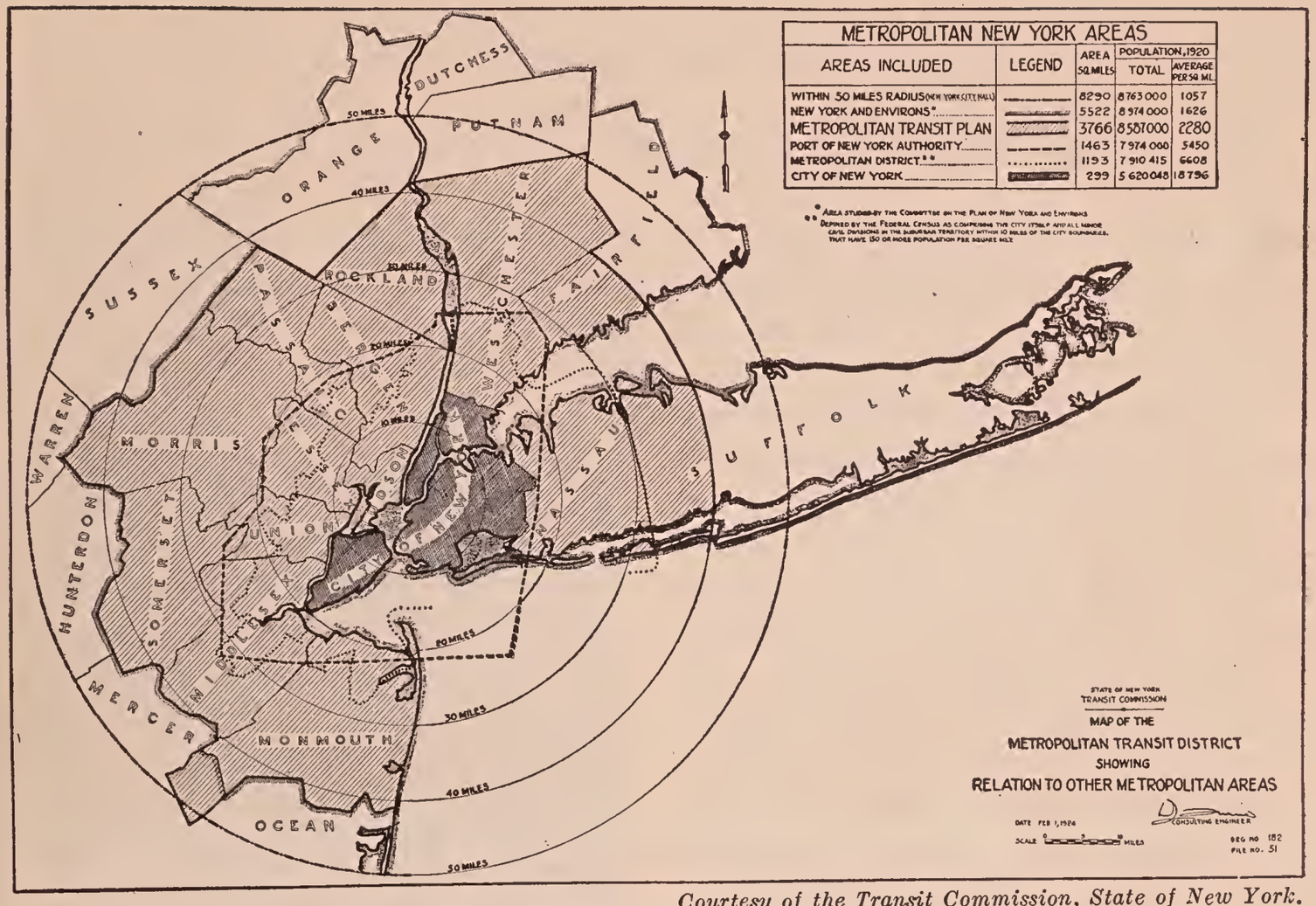
The Grand Central Station on Forty-second Street, New York City.

passengers got on to his train when it stopped at a town. All was changed in the towns within commuting distance from New York. It seemed to the stranger that every one had business away from home. He guessed right. In many of the suburban towns a large majority of the business men and women spend their days working in New York.

The country man noticed that the highways leading into the city were much busier than his quiet country roads. Freight and passenger automobiles crowded each other as they hurried along.

His train was a "through" train, so it did not stop at many of the smaller suburban stations. It passed through town after town until the city proper was reached —even then it took fifteen minutes to reach the city terminal. The station at which our friend arrived was the Grand Central Station on Forty-second Street. The other great terminal station in



Courtesy of the Transit Commission, State of New York.

This map shows the limits of the areas discussed. Study it carefully.

New York is the Pennsylvania Station between Thirty-second and Thirty-third streets on Seventh Avenue. These great stations where thousands of people arrive or depart each day are placed as near the center of the city as possible for the convenience of the travelers. There are other terminal stations on the New Jersey side of the Hudson River. More will be said about the railroads and railway terminals in another chapter.

Metropolitan New York.—Let us now turn to the region known as the metropolitan area that the countryman thought of as being the city itself.

New York City has definite boundaries like all other cities, but because of its great size it affects a large area around it. The city along with the region round about

it and in many ways affected by the city's life and business, is called the metropolitan area.

The metropolitan New York area differs in size according to what side of the life of the city concerns us. The United States Census Bureau defines it as all of the city itself and all other cities and smaller communities within ten miles from the city boundaries. The New York Port Authority is interested in transportation problems in New York and the large cities near it, so the metropolitan area of the Port Authority is somewhat larger than the Census Bureau area. The Port of New York District as outlined by the Port Authority extends roughly from the City Hall in Manhattan, twenty-five miles to the north, sixteen miles to the east, twenty-three miles to the south, and twenty miles to the west. It includes one hundred and five villages, towns, and cities within its boundaries. This body is directed by law to make studies of the ways and means of developing the port, especially as to the question of transportation.

Plans for the city of the future call for surveys and studies of the country from a few miles north of Newburgh on the Hudson to the Asbury Park section in New Jersey. This section is between eighty and ninety miles from the eastern to the western boundary. (See map for the different areas.)

Questions

I. What do you mean by commuting distance? What does the word "metropolitan" mean?

II. How far from where you live are the boundaries of the largest metropolitan area discussed in this chapter?

III. Why consider such a large area in plans for the future?

CHAPTER II

The City and Area from Early Times to the Present

The Present, an Age of Change.—The present age is one of rapid changes. Great buildings have replaced the small structures of fifty years ago. Automobiles have taken the place of horse-drawn vehicles on land, and the giant self-propelled boats have driven the sailboats from the seas. The hum of the aëroplane motor is as common as it was strange a few years ago.

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Dyckman farm house, one of the oldest homes in New York.

It is difficult for us of such an age to journey back to the peaceful scene that greeted Henry Hudson in 1609 when he first sighted the river that now bears his name.[1] A Hudson or East River without the busy ferryboat, the hustling tug, and the stately ocean-going vessels is hard for us to imagine. If we include in this picture Manhattan Island without its skyscrapers and thousands of other buildings, the scene is still stranger.

Hudson's Discoveries.—Hudson thought the river that he had found might be the passage across the continent that had long been sought by European explorers. His journey up the river convinced him of the folly of this notion. He did learn, however, something of real value to the

[1] The Hudson River is sometimes called the "Rhine of America." The Indians called it Skatemuc. One European called it the "Great Stream." The Dutch called it the Mauritius after the Union General Maurice. To others it was the North River or the River Flowing out of the Mountains. Not until after 1664 did Englishmen give it the name "Hudson."

Dutch people by whom he was employed. He learned that trading with the Indians for furs might prove very profitable. He ascended the river as far as Albany and then turned back. His little vessel, the *Half Moon,* was a strange sight to the natives. As compared with the water crafts to be found on the Hudson River to-day, it would be as strange a sight to us as it was to the Indians. Hudson's discovery gave the Dutch a claim to the Hudson River country. They claimed it under the name of New Netherland.

The Settlement on Manhattan Island.—In 1626 a permanent settlement was made on "the island of Manhatas" by colonists of the Dutch West India Company. This settlement was called New Amsterdam. In the same year one of the greatest real estate deals of history was made. Peter Minuit, the director general of the province, purchased the part of the city of New York now known as Manhattan Island from the Indians for an assortment of beads, buttons, cloth, and trinkets, said to have been worth about twenty-four dollars. What a trifling sum, indeed, for land that at the present time commands a yearly rental of several times twenty-four dollars for the use of a square foot of ground in the busy sections of the city.

Two hundred and seventy people had settled in the village on the

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The purchase of Manhattan Island from the Indians.

southern end of Manhattan Island by 1628. Colonists continued to arrive from various countries in Europe. So many, in fact, that by 1643 it is said that eighteen different languages were spoken by townsmen of New Amsterdam, as it was then called. By 1653 the settlement had grown to be a city. In that year it was granted a municipal government similar to that of cities in Holland.

The Ownership of the Colony.—

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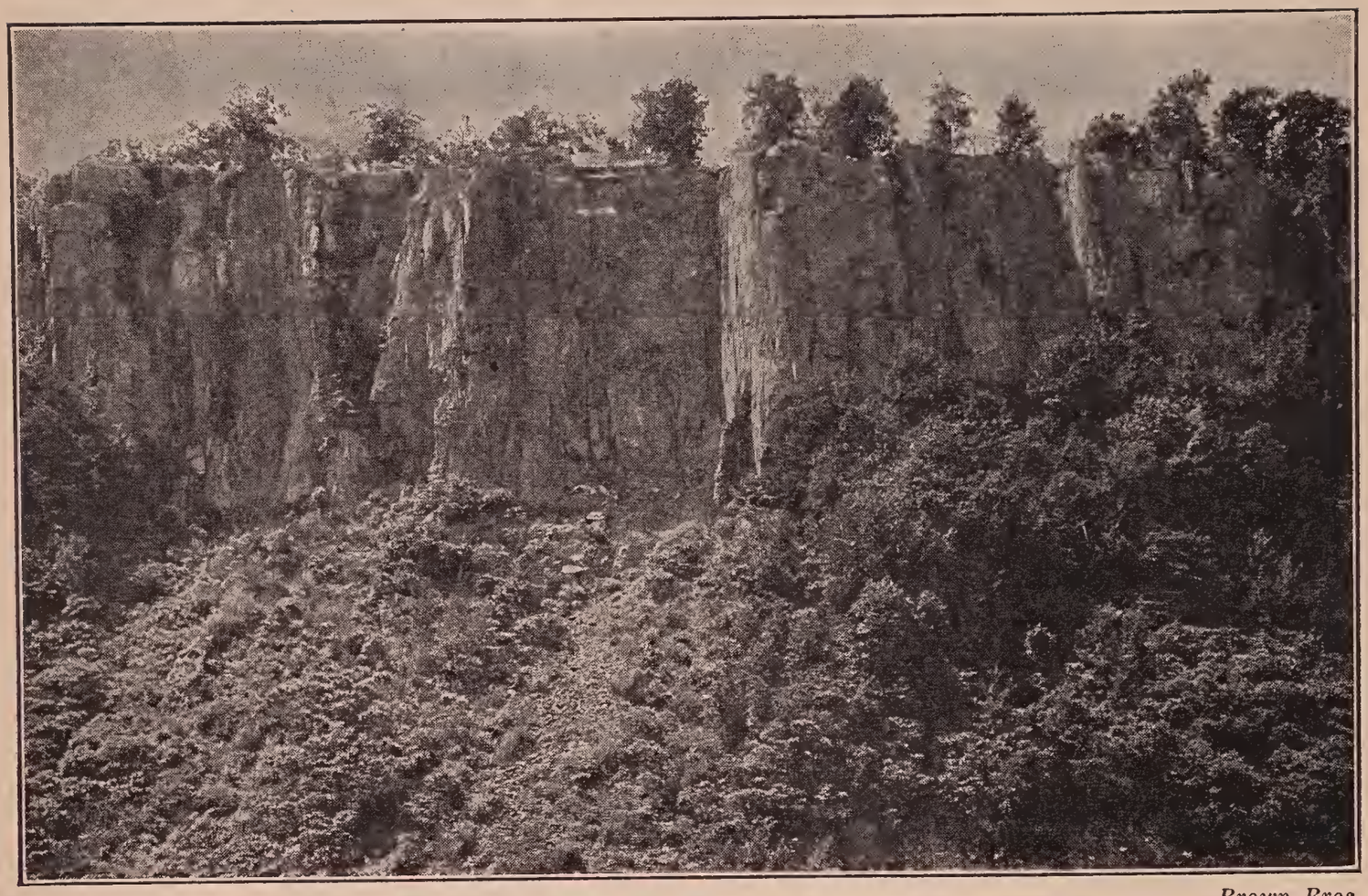
An early view of Fort Amsterdam from an engraving made in Holland.

The geography of the country played an important part in determining the ownership of the colony founded by the Dutch at the mouth of the Hudson River. The New Englanders and Great Britain claimed the Hudson River country. The Hudson was a natural western boundary of the settlements in Connecticut and Massachusetts. It was also the one great waterway that gave the settlers of western New England an outlet to the sea along with a good harbor for shipping.

To make good the British claim, the Duke of York sent out a fleet in 1664 to seize the Dutch colony. Governor Peter Stuyvesant fretted and declared that he would resist, but he was obliged to surrender. The city was taken by the British without bloodshed. Along with New Amsterdam the whole of New Netherlands passed into the hands of the British.

The name of New Netherlands was changed to New York and the same name was given to New Amsterdam. This name was selected in honor of the British proprietor.

Early New York.—New York of 1664 had a population of fifteen hundred souls. The village was built on the southern part of Manhattan Island, and extended from the East River to the Hudson River. Along the northern bound-



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The Palisades on the New Jersey side of the Hudson River.

ary was a great wall of earth along the top of which was a palisade of logs. The logs were set on end in the earth; their upper ends were sharpened and all were joined together by bolts and straps of iron. This formed a barrier against enemies that might approach from the north. Wall Street, one of the famous streets of the world, now occupies the ground where this old defensive wall stood. This street is the banking center of the United States, if not the world. At the southern extremity of the island was a little stone battery overlooking the bay and the two rivers. The name, "The Battery," is still applied to the southern waterfront point of the island where the little fort stood.

In 1673 the Dutch, while at war with England, seized Manhattan, but when peace was arranged the following year, the British re-

sumed control of the province. From then until the Revolution the government of the city was in the hands of successive provincial governors sent over from Great Britain.

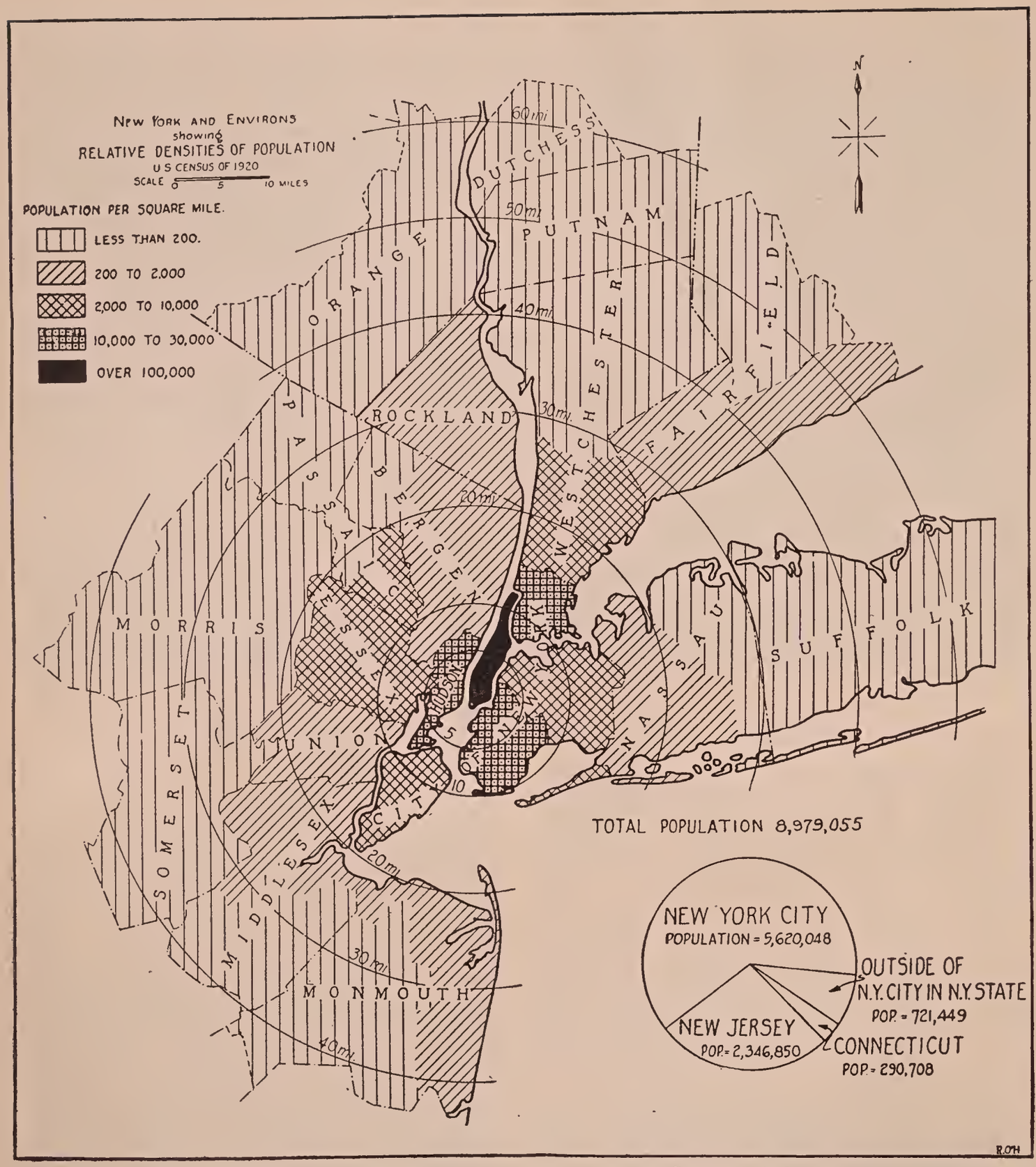
New York Becomes a Great City.—With the coming of the industrial development of the United States, New York soon became the foremost city of the New World. Its location on one of the finest harbors in the world, also its position at the end of the only level route to the Mississippi Valley, decided its place among American cities. The opening of the Erie Canal in 1825 and the building of railroads a few years later started the state and the city of New York toward a wonderful commercial growth. Within one hundred years New York has grown from a population of less than two hundred thousand to a city of more than six million people—the metropolis of the world.

The population of the city at the present time (1925) is how many times what it was when the first United States Census was taken (1790)?

New York and Other Cities in the United States.—One large city in the United States, Los Angeles, is larger in area than New York City. Chicago, the second city in size in the country, is a little more than half as large as New York. It has less than half the population of New York. Statistics show how New York compares with other cities in the United States. A study of them will make clear that New York is not only the metropolis of the nation but it also is far ahead of all other cities in population.

The Extent of New York City.—The Battery, at the extreme southern end of Manhattan Island, is fifteen and one half miles from the extreme northern boundary of the city, seventeen miles from the eastern boundary of Queens Borough, and nineteen miles from the southern point of Staten Island.

With a population so great and an area so immense, it is not strange that the average citizen of New York does not know his city except as his business may call him to various parts of it. To many people both in and away from New York, Manhattan Island is the New York City. This is true largely because the great centers of business are located on Manhattan Island. The great banking center is on Wall Street.



Courtesy of the Russell Sage Foundation.

The municipal government buildings are a few blocks north of the Battery. Many large department stores are farther up town. Around Forty-second Street is the theater district. All this calls much attention to Manhattan and away from other parts of the city.

New York Acquires Territory.—A brief history of the growth in territory of the city should give us a better idea of the city as it is today.

In 1790 the city extended from the Battery to the lower end of City Hall Park. At that time New York was the capital of the nation, and continued so until 1797.

West Farms and Kingsbridge were annexed to the city in 1874. In 1895 Westchester, Eastchester, Pelham, and Wakefield were annexed. The greater city was formed on January 1, 1898, when the city of Brooklyn, all of Staten Island, and what is now Queens County, became a part of the city (sometimes called Greater New York).

The city is divided by natural boundaries into four divisions—Manhattan Island, The Bronx, the part of the city on Long Island, and Staten Island. For purposes of government the city is divided into five boroughs. Each of these boroughs is a great city in itself. They are Manhattan, Brooklyn, The Bronx, Queens, and Richmond. See the map for the location of the different boroughs.

Questions

I. What are some of the changes in city life within the last fifty years?

II. What is a "good location" for a city?

III. Trace on a map the level route to the Mississippi River.

IV. Give four reasons for the growth of New York City.

V. What is the advantage of the many miles of waterfront in New York City?

VI. Why is it difficult to know New York City?

CHAPTER III

The Boroughs of New York

Knowing New York.—Every resident of New York is first of all a New Yorker; secondly, he is interested in seeing his home borough grow and prosper; and thirdly, he should be a good citizen of his own little home community. A good slogan for every home, school, church, and business place would be, "Know Your City."

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City Hall Park as it would appear if the Post Office building were removed.

Manhattan Borough. — The Borough of Manhattan includes not only Manhattan Island, but Gov-

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Washington arriving at the Battery in 1789.

ernors, Bedloe, Blackwells (now called Welfare Island), Ward's, and Oyster islands. The island of Manhattan lies between the Hudson River on the west, where it flows into the New York Bay at the Battery, and on the east the East River or channel connecting Long Island Sound and New York Bay. Spuyten Duyvil Creek and the Harlem River separate the island from the mainland on the north and northeast. From north to south the island is 13½ miles

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Looking toward Broadway across Madison Square. Fifth Avenue and Broadway cross at this point.

long, and at Fourteenth Street it is 2¼ miles wide.

A large part of the island is of rock foundation. Upon this solid rock have been built great structures that are the wonder of the age.

Commerce and Trade in Manhattan.—From the standpoint of trade and commerce Manhattan is the most important of all the boroughs. Here are to be found many industries that exceed those of any other city in the quantity of output. Being an island, it has a waterfront of many miles that may be used for docks. It is the oldest of all the boroughs and so took the lead in annexing the other parts of the city to make the greater city. The center of the city government is located in this borough. The many great department stores in the borough cater to the trade of millions of the residents of New York as well as to

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Pennsylvania Hotel at Seventh Avenue and Thirty-third Street.

an army of transient visitors who come to New York to shop, to work, to attend conventions, or to see the sights of the city. This army of daily visitors to New York who commute daily or come from other parts of the country exceeds in number the whole population of the states of Arizona, Vermont, or New Mexico.

Attractions for Visitors. — The many hotels in Manhattan provide food and shelter for the visitors to the city. The numerous theaters give them entertainment. For those who care for other forms of recreation, Manhattan has one of the greatest art museums in the world, the Metropolitan Museum of Art in Central Park with its main entrance on Fifth Avenue at Eighty-second Street. There is also the American Museum of Natural History at Seventy-seventh Street and Central Park West. In Battery Park is the Aquarium, housed in a building that was originally built as a fort and was used to defend the city in the War of 1812. There are also numerous parks in Manhattan. Chief among these is

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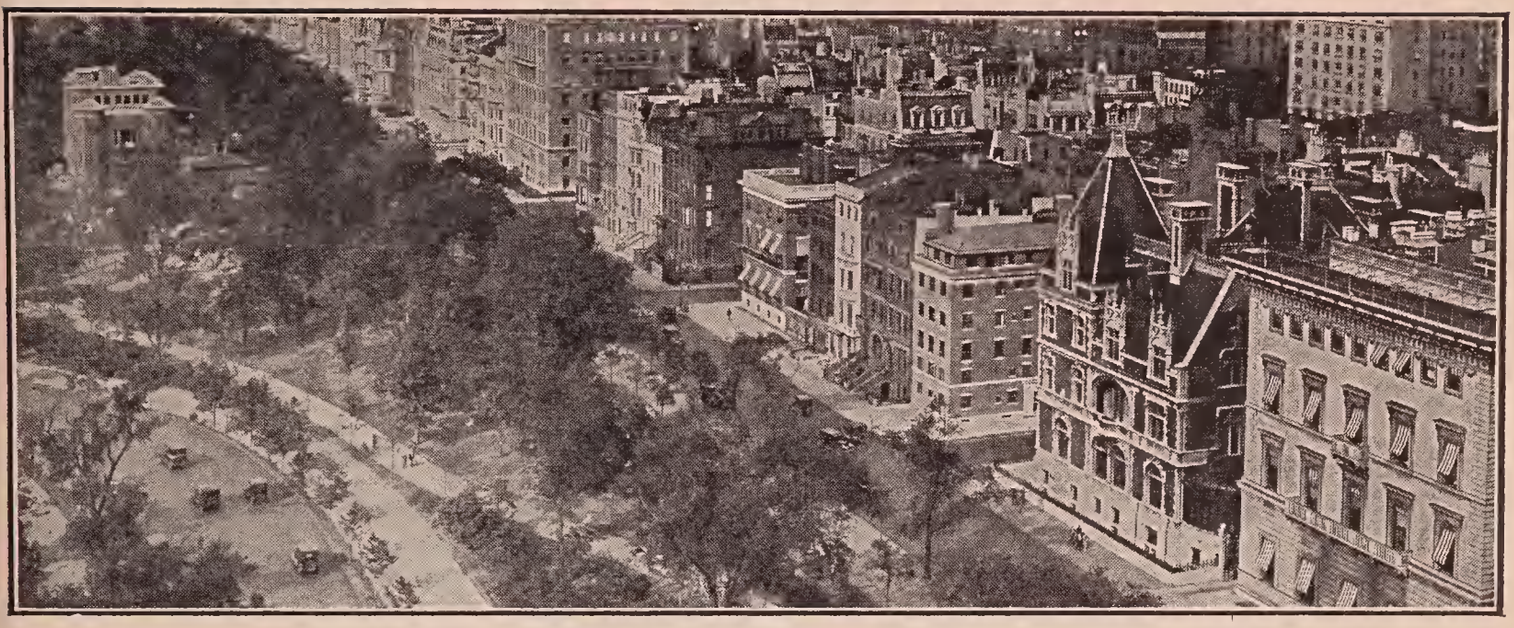
Battery Park.



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Looking north along the east side of Central Park.

Central Park between Fifty-ninth and One Hundred and Tenth streets. The New York Public Library also is one of the important places that draw people to Manhattan. Columbia University on Morningside Heights is one of the largest universities in the world. New York University has its central offices and many of its buildings at Washington Square. All of these places for recreation and education will be discussed in another chapter.

To land the host of workers and visitors in Manhattan there are railways with terminals at convenient places, subways, tube trains, ferryboats, and thousands of privately owned automobiles. It is no wonder that with all these attractions Manhattan is often thought of as the city of New York. Indeed a beautiful book of illustrations prepared a few years ago on "New York" gave all of its space, except two or three pictures, to views of buildings and streets of the south half of Manhattan Island.

Other boroughs than Manhattan lay claim to greatness, however. Let us see upon what they base their claims.

The Borough of Brooklyn.—It seems best to first consider the borough next in population and four times the area of Manhattan, the Borough of Brooklyn. A borough with so many people and so

much room to expand surely has a great future before it.

The beginning of Brooklyn was the little settlement made in 1643

Borough	Area Sq. Miles	Population 1920 U. S Census	Population Est. Jan. 1 1924
Manhattan	22	2,284,103	2,256,693
Brooklyn	77	2,018,356	2,233,647
Bronx	41	732,016	937,040
Queens	130	469,042	625,390
Richmond	57	116,531	135,176
City of New York	327	5,620,048	6,187,946

almost a mile from the Long Island shore about midway between Gowanus Creek and Wallabout Bay. This settlement was chartered as the village of Bruecklen by the Dutch settlers. The name was given in honor of the little village of Bruecklen in Holland near Amsterdam. The name was spelled differently by almost every one; Breucklyn, Breuckland, Brucklyn, Broucklyn, Brookland, and Brookline were some of the spellings to be found in the early days. Finally during the nineteenth century the name as it is now was generally adopted.

The Extent of Brooklyn.—Brooklyn includes the county of Kings. In it are such well-known districts as Bay Ridge, Gravesend, Flatlands, Flatbush, and Coney Island, Manhattan, and Brighton beaches. It is surrounded by water on three sides and has a waterfront of 201.5 miles. Twenty-five miles of this have been improved. The piers devoted to foreign commerce alone cover 15.6 miles. The longest of Brooklyn's piers is 1,740 feet in length. Another pier has an area of seven acres.

A City of Homes.—Brooklyn is usually thought of as a city of homes; so it is. Late figures show 130,286 one- and two-family houses, nearly fifty thousand tenements, and about three hundred elevator apartments. It is not only a home city; it is one of the greatest commercial and manufacturing centers in the United States.

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Brooklyn in 1854.

Brooklyn's Rank Among Cities.—Brooklyn, if considered alone, would be the third largest city in the United States and would rank fifth among the great cities of the world. Outside of New York City itself, but one city (Chicago, Illinois) exceeds Brooklyn in population.

As compared with other cities, Brooklyn exceeds in population the combined population of Buffalo, Rochester, Syracuse, Albany, Yonkers, and Utica in New York along with Newark, Jersey City, and Paterson in New Jersey. It has thirty times the population of Nevada.

Transit in Brooklyn.—The union between Brooklyn and the other boroughs has been of great benefit to all. United as one city, everything has been done to bring the different parts of the city closer together. In 1898 all travel between Brooklyn and Manhattan was over the Brooklyn Bridge or by ferries. To-day three hundred thousand passengers can be carried every hour over the bridges, through the tunnels, and by the ferries that join the two boroughs.

This seems a large number, but the vast populations of the various boroughs increasing by leaps and bounds call for more and better means of transit. Plans are already under way to bring this about.

Brooklyn has 1,258 miles of streets, which, if placed end to end, would reach from Brooklyn to the Gulf of Mexico. Over nine hundred miles of these streets are paved. There are twenty-nine miles of boulevards.

Industrial Brooklyn.—The industries of Brooklyn are varied. It ranks fourth in output among cities of the United States. Some of the greatest industries are the manufacture of bread and baking products, men's clothing, women's clothing, boots and shoes, confectionery and ice cream, copper, tin and sheet iron, and foundry and machine products. The following table gives some facts about some of the important industries in Brooklyn:

	No. Establishments	No. Persons Employed	Value of Products
Boots and Shoes	143	9,725	$45,158,936
Bread and Bakery Products.	837	6,062	39,397,797
Men's Clothing.	507	13,115	35,680,343
Women's Clothing	558	8,345	26,695,969
Confectionery and Ice Cream	231	4,465	25,859,532
Copper, Tin and Sheet Iron...	130	1,057	4,550,893
Foundry and Machine Products ...	207	13,932	32,417,504
Furniture	118	2,934	14,641,657
Knit Goods....	241	6,702	43,185,419
Printing and Publishing ..	267	2,577	7,804,340
Tobacco and Cigars	408	2,950	35,761,932
Food Products.	100	1,497	8,572,981
Automobile Repairing	124	737	2,543,354
Millinery and Lace Goods..	108	1,383	2,153,264
Paints and Varnishes	68	2,265	37,677,776

Parks and Museums.—There are fifty-one parks in Brooklyn. The largest park of the park system is Prospect Park, consisting of 526 acres. This park is famed for its natural beauty. One of the world's most famous playgrounds, Coney Island, is enjoyed by thousands of people every year. It has a boardwalk that stretches for several miles along the ocean front which may change the old Coney

Island into a magnificent shore resort like Asbury Park or Atlantic City.

The Brooklyn Public Library with its thirty-one branches and three stations supplies the citizens with reading material and a place to study.

The Brooklyn Museum on Eastern Parkway compares favorably with the museums of the great cities of the country. Other features of Brooklyn will be discussed in chapters on special subjects.

The Bronx.—Next in population after Brooklyn is the Borough of The Bronx. This borough is called "The Fastest Growing Borough of the City of New York" by the Bronx Board of Trade. If it were a separate city, it would rank sixth in size among the cities of the United States. It is the only one of the five boroughs of New York that is attached to the mainland. In spite of this fact it is bounded on three sides by water—the East River, Bronx Kills, the Harlem River, and the Hudson River—a total of eighty miles of waterfront. A good portion of this may be developed for shipping.

As in the case of Manhattan, the greater part of what is now the Borough of The Bronx was purchased from the Indians. "Two guns, two kettles, two coats, two adzes, two shirts, one barrel of cider, and six bits of money" was the amount paid for this land in 1639. Jonas Bronck was the purchaser; "Bronckslandt" was the area, and the Bronck (Bronx) stream flowed across it.

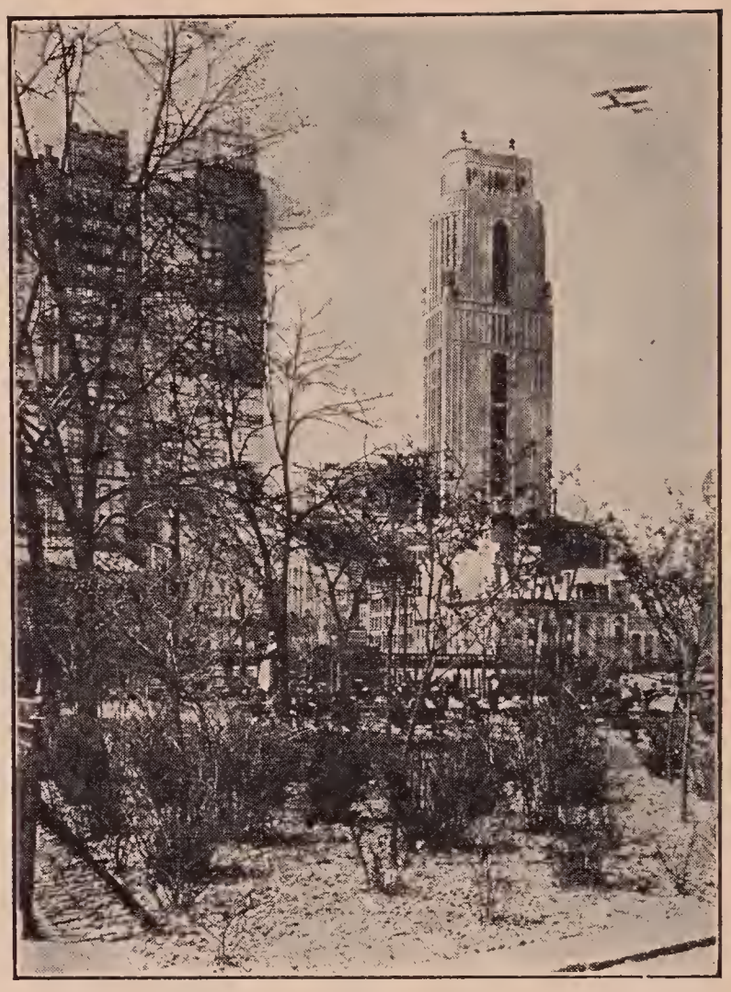
Industries in The Bronx.—The Bronx, like Brooklyn, is the home of thousands of the workers who spend their days in the factories and business places of Manhattan. There are over thirteen thousand one-family houses besides ten thousand tenements and many apartments in The Bronx. Not only is it a borough of homes, but there are over thirteen hundred industrial plants in the borough. The table below is from the 1920 census:

FACTORIES AND WORKERS

	Number of Establishments	Total Persons Engaged
Apparel Industries (not including leather apparel)	213	4,068
Food Products	318	2,036
Metal Industry	77	948
Printing and Publishing	72	638

	Number of Establishments	Total Persons Engaged
Chemicals, Paints, Drugs, and Allied Lines	4	7
Tobacco and Smokers' Supplies	177	582
Wooden Products	69	3,225
Leather Industry	8	26
Jewelry and Kindred Lines	5	23
Vehicles and Allied Lines	59	333
Notions and Novelties, not included elsewhere	9	109
House-furnishing Goods	27	125
Stone, Clay, and Glass Products	47	357
Miscellaneous Industries	285	12,703
All Industries	1,370	25,150

Parks in The Bronx.—No other borough of the city can boast of such parks as The Bronx. The park area alone is about one-third the entire area of the whole of Manhattan Island. Indeed, the park space of The Bronx exceeds that of Cleveland, Detroit, or Cincinnati. Pelham Bay Park is the largest park in the city of New York. The two great parks famous throughout the country among those who enjoy sight-seeing are the New York Zoological Park and the New York Botanical Gardens. Another of the large parks is Van Cortlandt Park, on Broadway, near the northern boundary of the city.



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Looking across Bryant Park.

The Borough of Queens.—The Borough of Queens comprises all of Queens County, includes Long Island City, and all that portion of Long Island north and east of Brooklyn. Its eastern boundary runs through the village of Hempstead in Nassau County. Within its borders are Flushing, Jamaica, Richmond Hill, Wood Land, Rockaway Beach, Far Rockaway, and

other well-known communities. Some of the residential and industrial sections are Astoria, Elmhurst, Jackson Heights, Corona, Forest Hills, Kew Gardens, Ridgewood, College Point, Whitestone, Bayside, and Arverne.

An Extensive Borough.—The area of this borough is a trifle more than one-third of the entire area of the city of New York. The Chamber of Commerce of the borough calls it "The Biggest Borough in the Biggest City in the World."

This borough is about one-tenth the size of the state of Rhode Island, and has a population nearly as large as that state. An idea of its size may be obtained when we know that there are seventy-one miles of railroad tracks of the Long Island system in the borough.

Means of Travel in Queens Borough.—No other borough is better provided with connecting links to Manhattan Island than Queens. There are eight tunnels under the East River. Queensboro Bridge connects with Manhattan, and Hell Gate Bridge with The Bronx.

Waterfront in Queens.—There are ten miles of fine beaches on the Atlantic Ocean. Besides this wonderful stretch of beach, Queens has over two hundred miles of waterfront on the East River—Newtown Creek, Flushing Bay, Long Island Sound, and Jamaica Bay. With such a fine opportunity for developing industries, it is difficult to tell about the industries that will probably be found in the future Queens. In 1920 there were already over sixteen hundred industrial plants in operation, and new ones have been added almost daily since that time.

Although the borough has much open country and plenty of breathing space, twenty parks have been established in the borough. The citizen of the future will appreciate these playgrounds.

The Doorway of the Nation.—The Port of New York may be called the doorway of the nation. The last of the five boroughs that we are to consider, Richmond, is at the threshold of this doorway. The vast world commerce of New York on its way to and from the harbor passes within a few hundred yards from Staten Island, which is the Borough of Richmond. The island is also Richmond County.

Staten Island in Early Times.—Before the white man came,

Staten Island was occupied by the Raritans, a branch of the Delaware Indians. The Indian name for the island was "Aquehonga Man-ack-nong," meaning the place of the high sandy banks. Another meaning given for the same name is "the place of the bad woods." Henry Hudson named the island "Staaten Eglandt," as a memorial to the States General of the Netherlands under whose direction he was sailing.

The Dutch established the first settlement on the island, "Onde Dorp" (old town).

It may seem strange that Staten Island, being so near the mainland of New Jersey, was not made a part of that province in early times, but such was not the case. Because of a dispute over collecting taxes, the Duke of York, in 1668, decided that all islands in the harbor that could be circumnavigated in twenty-four hours should belong to New York, otherwise to New Jersey. Captain Billopp succeeded in making the circuit of the islands, Staten Island included, so New York claimed it. This claim was disputed until 1833, when a settlement was made in favor of New York State.

The Geography of Staten Island.—Staten Island is shaped like a pear with the large end at the north. It is fourteen miles long and seven miles wide at its greatest width. The northernmost point is about five miles from Manhattan Island. It is separated from New Jersey by Arthur Kill or Staten Island Sound. At the upper end of the island the borough is divided from Bayonne Peninsula by Kill van Kull, a waterway three miles long and about one-third of a mile in width, opening directly into New York Bay. The Narrows separate the island from the Borough of Brooklyn. The Narrows is a strait about one mile wide, and is the pathway of more than ten thousand oversea passenger and freight vessels that visit New York Harbor every year.

Commerce and Industries.—Being so near the channels of the nation's commerce gives Staten Island a great opportunity to develop commercially and industrially. Its shore line is excellent for the building of piers and docks. Construction of these piers is being done now by the city. Some interesting facts about the industries of the borough are given in the following table:

INDUSTRIAL ESTABLISHMENTS ON STATEN ISLAND EMPLOYING FIVE OR MORE PERSONS PER PLANT

Industries	No. of Plants	—No. of Employees— Office	Shop	Total
1. Building Materials	10	32	898	930
2. Chemicals, Colors, and Dyes	7	11	441	452
3. Fireworks	3	3	266	269
4. Foods, Beverages, etc.	11	27	764	791
5. Ice	3	2	41	43
6. Metals and Metal Products	8	79	568	647
7. Paints, Oils, and Varnishes	3	24	240	264
8. Paper, Paper Products, and Printing	7	30	363	393
9. Public Utilities	6	11	614	625
10. Shipbuilding and Repairing	18	280	6,526	6,806
11. Textiles and Allied Products	27	5	839	844
12. Miscellaneous	17	185	3,279	3,464
	120	689	14,839	15,528

Staten Island is so near the mainland of New Jersey that Arthur Kill has been bridged for railway freight traffic. The Baltimore and Ohio Railroad has freight and passenger lines from one end of the island to the other. Several ferries connect the island with Manhattan and Brooklyn. Work has also commenced on a tunnel that will join the borough with Brooklyn.

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Trial trip of the *Clermont* on the Hudson River in 1807.

The Communities of Staten Island.—The surface of the island is uneven. Dongan Hills in the northeastern part of the island is the highest point on the Atlantic coast between Maine and Florida. The rough country of the island is not suited for industrial growth, but it is excellent for homes. In fact, much of the island is more like the country than the city. The following description of the population of the borough will give a good idea of conditions there. "Compared with the rest of the borough, the north and east shores of Staten Island are fairly well de-

veloped, the following communities practically adjoining one another: Rosebank, Clifton, Stapleton, Tompkinsville, St. George, New Brighton, Sailors Snug Harbor, Livingston, West New Brighton, Port Richmond, Tower Hill, Elm Park, Mariners Harbor, and

Brown Bros.

One of the narrow streets of Chinatown in New York City.

Arlington. All of these lie within a two-mile belt across the northern and eastern sections of the island. South of the two-mile belt, the island consists to a large extent of open country, farm lands, wooded areas, residential estates, and the like, along with a number of small hamlets. Along the west shore the only towns are Linoleumville, Fresh Kills, Green Ridge, Rossville, and Charlestown. At the southern tip of the island is Tottenville, with a population of several thousand, the largest town in the lower part of the borough of Richmond."

The People of New York.—Only a few of the many things that might be told about New York have been given in this brief account. Much could be written about the many nationalities represented in the city. Many of these gather by themselves in certain sections of the city. There are parts of the city which are exclusively Jewish; others that are Italian. The Greek colony is a growing one. There is a Chinese quarter downtown, a large Negro section uptown, and a small but distinct Syrian group on the West Side. There are other neighborhoods which are characteristically German, others French, others Roumanian, others Russian. Practically every European language is spoken somewhere every day in some part of this great city. There are many newspapers printed in foreign languages which have a large daily circulation. But the children of these people all attend public schools where they hear but one

Brown Bros.

The statue in memory of Nathan Hale in City Hall Park, New York City.

language, and that the language of America. And those sons and daughters of foreign parents bring back from the school into their homes the ideals of Americanism and thus help their fathers and mothers and older relatives to become good and loyal citizens of this beautiful country which is doing so many good and wonderful things for them.

Historic Places.—It would take several days to pay a visit to all of the places of historic interest in the city. Many of the stirring events before and during the War of Independence took place here. The Battle of Long Island and Harlem Heights took place within the present limits of the city. In City Hall Park there is a statue of Nathan Hale which every boy and girl should see and regard as an inspiring lesson in patriotism. Washington was inaugurated President in New York and lived there during the first year of his administration.

Many men and women prominent in the affairs of our country have lived in New York. (See Appendix for Points of Interest in New York.)

Robert Fulton set out from this city on his trial trip that proved that the steamboat was a practical means of traveling.

Fifth Avenue and Broadway are famous among the great streets of the world. Some of the most wonderful stores in the world are on Fifth and Sixth avenues and other near-by streets. Some streets are lined with pushcarts where the shopper may supply his wants in a very simple way. Great bridges have been built over the East River. The buildings in the city range in size from the

largest in the world to tiny structures. A city so great cannot be described in detail in any one book.

Questions

I. Why should you know your city?

II. We often speak of Manhattan Island. Do you think of it as an island? Why?

III. Why has Brooklyn become a city of homes?

IV. What is the difference between a boulevard and a street?

V. Explain how it is true that The Bronx is the only one of the boroughs "attached to the mainland."

VI. Why do you think there are more parks in The Bronx than in Manhattan?

VII. Why is New York spoken of as the "doorway of the nation"?

VIII. Why do people of the same nationality gather in colonies by themselves?

CHAPTER IV

The Metropolitan Area in New Jersey

West of the Hudson River.—The map on page 38 shows the extent of the territory so affected by the city of New York that it is included in the metropolitan district. Much of this section is open country. There are many truck and dairy farms that help supply the markets of the New Jersey cities and New York. Many small towns that are fine home towns have sprung up. The man who likes the country finds the ideal home in these suburban places, where there is space for a lawn and garden. Perhaps the reason there are not more such homes is that many have not tried the plan of owning their own home.

Being so close to New York and having so much in common with that city, it would seem that many of the port cities in New Jersey should be a part of that city. They would be, no doubt, if it were not that they are under a different state government and cannot unite with New York as a city.

Newark, the First City in New Jersey.—The first city in size and importance in New Jersey is Newark.

In May, 1666, a small band of colonists from Milford, Connecticut, under the leadership of Captain Robert Treat and Reverend Abraham Pierson, sailed up the (Pesayak) Passaic River and set

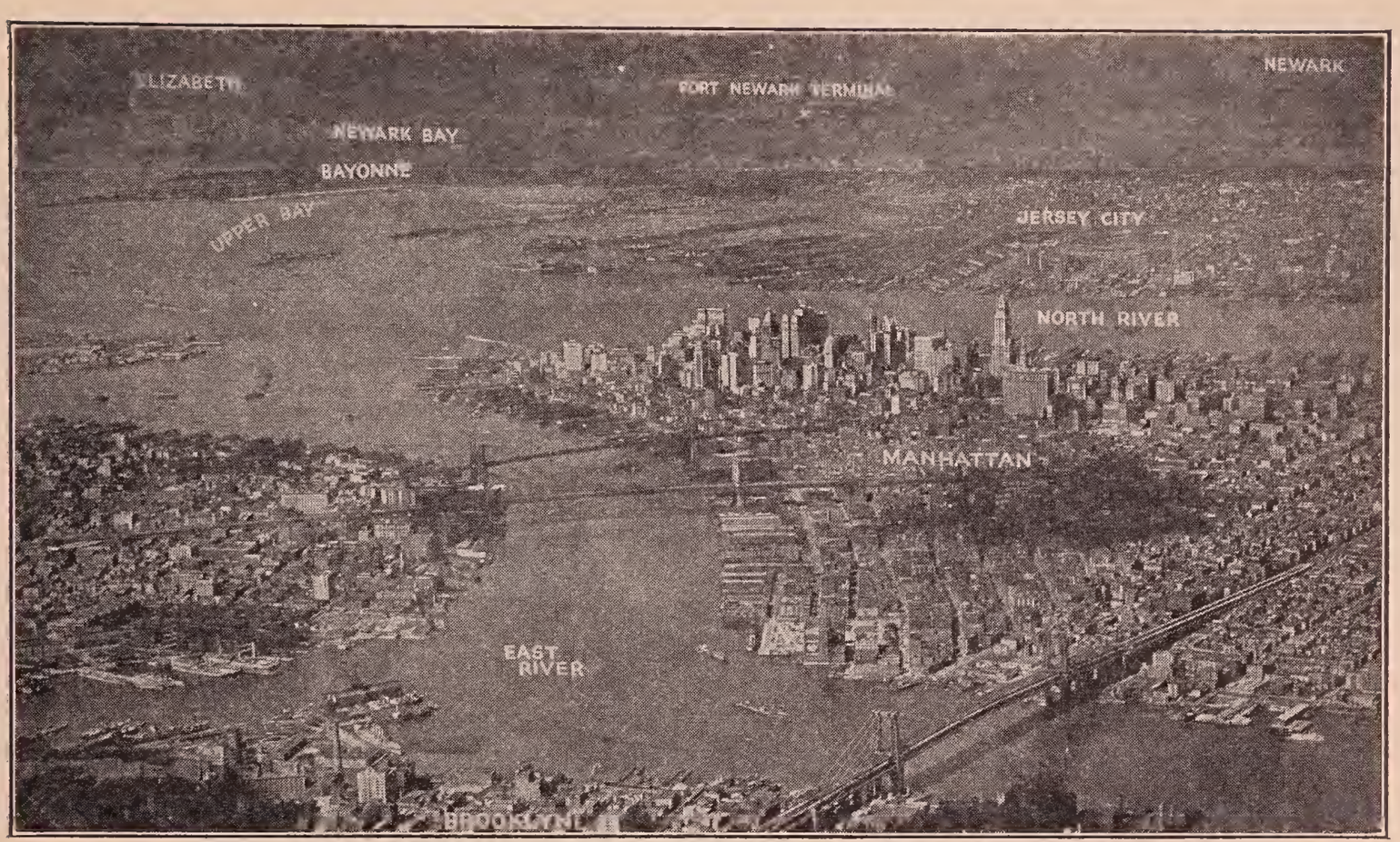

Photo by Fairchild's Aerial Corporation.

An aerial view of Lower Manhattan showing location of the suburban areas.

foot on a tract of land which had been set aside for settlers. The settlement was named Milford, but afterward the name was changed to Newark in honor of Reverend Pierson who had received his ministerial training at Newark, England.

Newark is eight miles from New York City, on the west shore of Newark Bay. It extends for six miles along a high ridge which rises a little west of the Passaic River and Newark Bay. It is, indeed, "a city set on a hill."

The first public building erected was a little church. From the cupola of this church men watched during services for Indians who might attack the settlement.

The village was prosperous from the outset. By the end of ten years a sturdy little boat made regular trips between Newark and New York and Elizabethtown, carrying produce back and forth. The population did not increase rapidly, however. Over one hundred years lapsed before there were

Courtesy Chamber of Commerce, Newark, N. J.

Port Newark, the Bayonne Peninsula, New York Bay, and Staten Island.

Courtesy Chamber of Commerce, Newark, N. J.

Market Street, Newark, N. J.

more than one thousand inhabitants in the town.

Newark, an Industrial Center.— From early times Newark has been an industrial center. The Morris Canal, completed in 1836, connected the city with the coal regions in Pennsylvania, so necessary fuel to run its machinery was provided. As railroads were built, Newark found itself on many of the principal routes that had their terminal on New York Bay. This gave it access to the markets of the nation.

Seth Boyden was an important character in the town's welfare. He was an inventor and a manufacturer. He produced the first patent leather; he also carried on several successful experiments in the production of fruit.

By 1840 the population had reached seventeen thousand. There was a system of public schools which was established in 1836. The streets were lighted with oil lamps which were replaced by gas lamps in 1846.

At the present time 223 different lines of industry are found in Newark. This city is the home of the button industry, and is also the nation's finest jewelry center. More than one hundred plants are engaged in making boots and shoes, harnesses, automobile leather, and other leather goods. Other chief industries are the refining of copper, the manufacture of iron, steel, and brass products, electric machinery and apparatus, and shipbuilding. With so many industries and with such a large amount of manufactured goods, Newark has often been called "The Workshop of the Nation."

As a shopping center Newark is next to New York in the metropolitan district. Its fine department stores are much better than those usually found in a city so close to a very large city. Some of the

great insurance companies have their headquarters in Newark.

Port Newark.—Its location on Newark Bay and the Passaic River give it excellent means of shipping. There are eleven miles of waterfront on the river and bay. Many docks have already been

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The Court House at Newark, N. J. The Borglum Lincoln in the foreground.

built and extensive plans are under way for making Port Newark one of the greatest shipping ports in the world.

New York is easily reached from Newark by railroad, trolley, automobile, or by the Hudson Tunnels that connect with both the downtown and uptown sections of New York City. Trolley lines connect Newark with all neighboring cities and towns in New Jersey. In Newark, as in other cities, the automobile busses are carrying many of the passengers that the trolleys carried a few years ago.

Newark has several beautiful parks. Branch Brook and Weequahic parks are the two largest.

Education.—A complete educational system is to be found in the city. There is also an excellent public library. The public school system of Newark has been used as a model by many cities throughout the United States. One of the state normal schools is located there.

For the protection of the public welfare a great deal of money is spent each year maintaining a complete fire and police force. Public health receives a good deal of attention. The city water supply is the best that can be obtained. It comes from the Pequannock Watershed. A new reservoir is being constructed at Wanaque in Passaic County.

Suburbs of Newark. — Several small towns and cities lie round about Newark. Just north of the city across the Passaic River is the town of Harrison, the city

A scene in a park in Montclair, N. J.

of Kearney, and the village of East Newark. Important manufacturing plants in Harrison are foundries, machine shops, steel works, and electrical shops. In Kearney yarn, twine, and linoleum are made. Large thread mills are located in East Newark. South and west of Newark is Irvington.

West of the Passaic River and west and north of Newark are a number of beautiful residential towns and cities. Among these are Montclair, Bloomfield, Glen Ridge, East Orange, South Orange, and West Orange. Caldwell, a few miles west of Montclair, is the birthplace of Grover Cleveland. Summit lies south of Caldwell.

Some manufacturing is done in these towns and cities, but not much. They are the home towns of thousands of people who spend their days working in New York or the near-by New Jersey cities.

Montclair is the home of many of the most prosperous of New York business men. It has many homes surrounded by beautiful grounds. Many country clubs are supported by the families in Montclair.

The Montclair State Normal School is located in Upper Montclair.

The one town in this group that does considerable manufacturing is West Orange. The great Edison industries are located here as well as several other manufacturing plants.

Belleville is just north of the city. Nutley borders on the north side of Belleville.

The Sail and Harbor City.—Touching Newark on the south is the city of Elizabeth. This city was first settled in 1664 by a company from Long Island, being then known as Elizabethtown. It became a chartered city in 1855. Because of its excellent location for shipping, it is sometimes called "The Sail and Harbor City."

There are many fine residences in the city. It is also an industrial center of considerable importance. Within the last few years large automobile manufacturing plants have come to Elizabeth. Tools, electric supplies, cars, trucks, and heating apparatus are produced there.

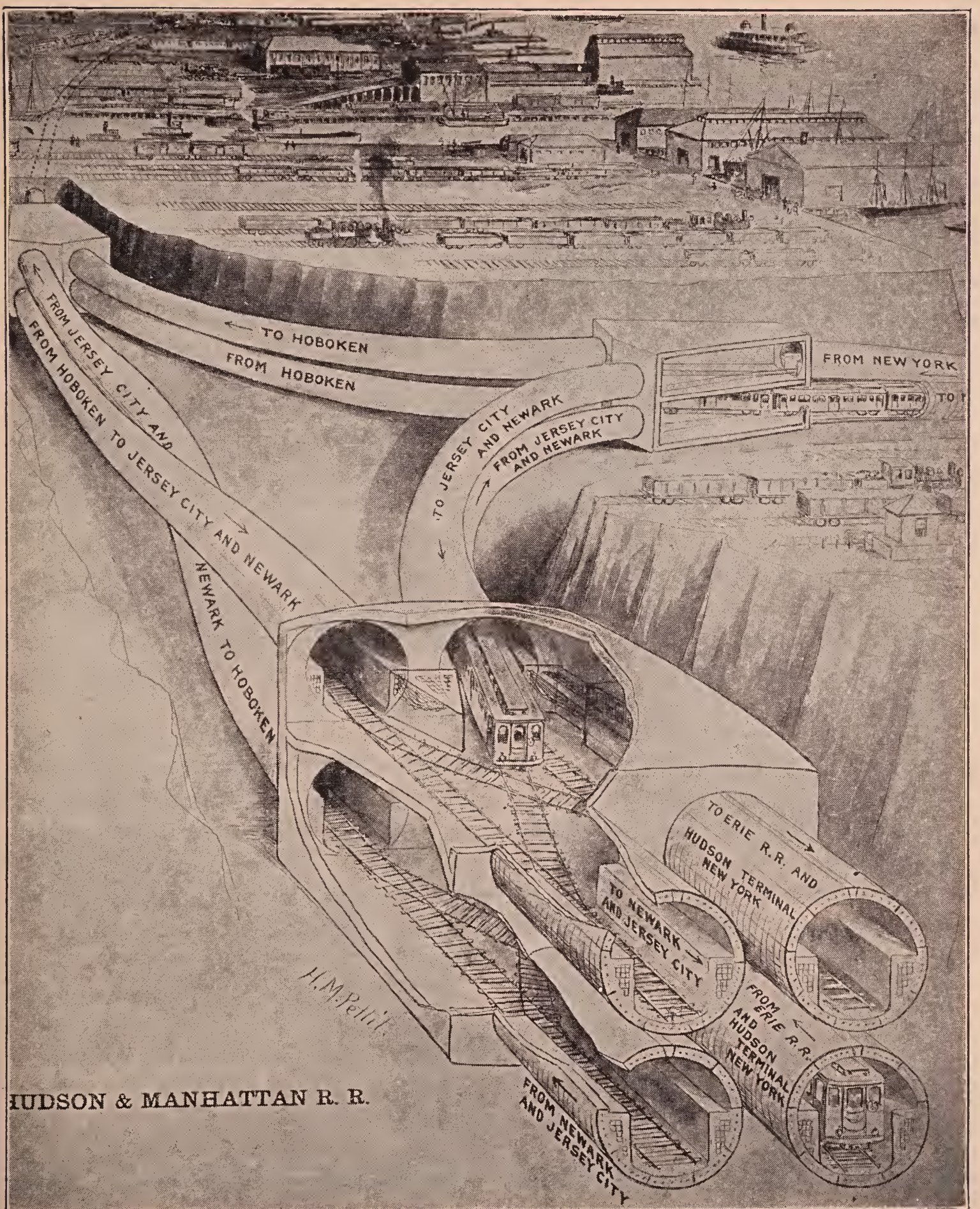
Elizabethport is the name given to the eastern part of the city near Staten Island Sound. The largest sewing machine works in the world are located there.

Cities Near the River and Bay.—On the peninsula bounded by the Hackensack River and Newark Bay on the west, the Hudson River and New York Bay on the east, and the Kill von Kull on the southeast, are several large cities. These cities are excellently located. The waterfront is convenient for ocean shipping, and large railroad trunk lines pass through them or terminate within their borders. They lie nearer the heart of the New York City business district than many parts of that city itself.

The Early History of Jersey City.—Jersey City is the largest of the group of cities on this peninsula. It ranks next to Newark in New Jersey in size and as an industrial city. This city contains the sites of the earliest settlements in New Jersey. The city of to-day was formed by the consolidation of Bergen, Hudson City, and Greenville along with the original Jersey City. This union of towns occurred in the years 1869–1873. Among the sites of early settlements in New Jersey included within the present boundaries the most notable is that of Bergen, which was founded in 1660, soon after Peter Stuyvesant, the Dutch Governor of New Amsterdam, purchased the land between the Hudson River on the east and the Hackensack River and Newark Bay on the west. The founders of Bergen were interested in education, and they accordingly reserved a site for a school when they laid out the plan of the village. This is the first site in the state of New Jersey used for school purposes. The present beautiful School Number 11 is on the same plot.

At first Jersey City only included Paulus Hook. As early as 1764 a ferry connected Paulus Hook with New York. This town was the starting place of the stage line to Philadelphia.

The Jersey City of To-day.—To-day Jersey City is the terminal



A diagram of the tubes that go under the Hudson River.

site of four railroad lines. The city has grown until it has a population of 305,911 (estimated 1924). The waterfront has been improved and there is dock space for hundreds of vessels. Some of the most important transatlantic liners dock at Jersey City. Numerous ferries connect it with New York, and several tunnels have been constructed under the Hudson River. The vehicular tunnel, described on page 113, will mean much to Jersey City and the other New Jersey cities in the metropolitan district. Trolley lines connect the city with all near-by points in New Jersey.

This city was first connected with the coal fields of Pennsylvania by the Morris Canal. The Delaware and Raritan Canal increased its importance by giving it an inland waterway to Philadelphia. Its location on New York Bay, where all the railroads must come to reach the markets of New York, insures its prosperity.

As an industrial city it is developing very rapidly. Many large grain elevators are to be found there. There are several slaughter houses in the city where the livestock consigned to New York and other markets is slaughtered. Of the by-products from the slaughter houses, soap, candles, chemicals, and fertilizer are manufactured. Much sugar is refined in the city. There is also a large production of tobacco products, foundry and machine products, and lead pencils.

The city is located on a ridge running north and south. The high ground furnishes many excellent home sites with fine views of the Hudson River. Health and education receive a great deal of attention. Being on a ridge, the sewage is easily drained east or west. The schools are of the best types and are housed in some of the finest school buildings in the United States.

Industrial Bayonne. — South of Jersey City lies Bayonne. This city has the best of locations for an industrial city. It is near the New York markets, easily accessible from the many markets of the United States, and has excellent facilities for building docks for ocean shipping. The most important industry of the city is the refining of petroleum, brought to its refineries by pipe lines from the oil fields in Pennsylvania and elsewhere. Tank cars and steamers bring oil from sources not reached

by pipes. Ore is refined in the city. There are also silk mills, foundries, and machine shops.

The Growth of Hoboken.—Directly north and bordering on Jersey City is the city of Hoboken. John Stevens bought the site of Hoboken in 1804. He judged that the rapidly growing city of New York would soon overflow to the west shore of the Hudson River. He was not mistaken. At first the growth of the town was slow, however. By 1855 the town was important enough to receive a charter as a city. It has grown rapidly and is now an important industrial center. It is connected with New York by ferry and by the tube under the Hudson. Some of the great steamship lines of the world have dock space in Hoboken. Many of its people are employed in the foundry and machine shops, in shipbuilding and repairing, and in the making of nautical and surveying instruments. Silk goods, lead pencils, and moving picture apparatus are also manufactured there.

Edwin A. Stevens, through his will, richly endowed the Stevens Institute of Technology in Hoboken. It is one of the best schools of its kind in the United States.

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The duel between Alexander Hamilton and Aaron Burr.

Other Cities and Towns Near Jersey City.—West Hoboken occupies a beautiful site on the Palisade ridge. Like others of the smaller cities in the metropolitan group, it would be regarded as a good-sized city if it were by itself away from other cities. It has a population of over forty thousand. A good deal of manufacturing is carried on within its borders. Its leading industries are silk manufacturing and dyeing, and the making of embroidery products.

North and west of West Hoboken on the ridge along the Hudson River are Union, West New York, North Bergen, and Guttenberg.

Farther west are the villages of Secaucus, Carlstadt, and Little Ferry. Weehawken, famous in history as the dueling ground of Alexander Hamilton and Aaron Burr, lies next to Hoboken on the north.

With such excellent means of reaching New York as are available in this section, there have grown up along the Palisades for several miles many beautiful residential towns. One of the most attractive of these is Englewood. Others are Leonia, Ridgefield Park, Bogota, Fort Lee, Cliffside, Fairview, and Edgewater.

The "City of Mills."—The third city in size in New Jersey lies north and west of Jersey City, about fourteen miles from the Hudson River. This is the city of Paterson.

This city does not enjoy the advantage of being on the waterfront of the ocean as Newark, Jersey City, Bayonne, and Hoboken. Being so near New York, however, it is within easy reach of the markets there. The Delaware, Lackawanna and Western, the Erie, and the New York, Susquehanna, and Western railroads pass through the city. Many automobile trucks are also used in carrying freight

Courtesy Chamber of Commerce, Paterson, N. J.

Passaic Falls. These Falls are within one half mile from the center of the city referred to on this and on the opposite page. They still furnish much power for the city's industries.

to and from Paterson. Trolleys connect it with many points on the Hudson River as well as other near-by cities and towns.

The site of Paterson was selected by Alexander Hamilton in 1792 as the location for his "City of Mills." The Falls of the Passaic River at this place led him to select this site because of the cheap power to be had. Governor William Paterson signed the charter of the city, and that led to the selection of the name that the city has at the present time. This city is the county seat of Passaic County.

With water power and the Mor-

ris Canal at first and railroads later connecting it with the coal fields, Paterson became a great commercial city. Viewed from any high point, it impresses one as "the City of Mills."

The "Silk City."—No city in the United States excels Paterson in the manufacture of silk. There are also large factories that make men's shirts. Besides there are many foundries and machine shops.

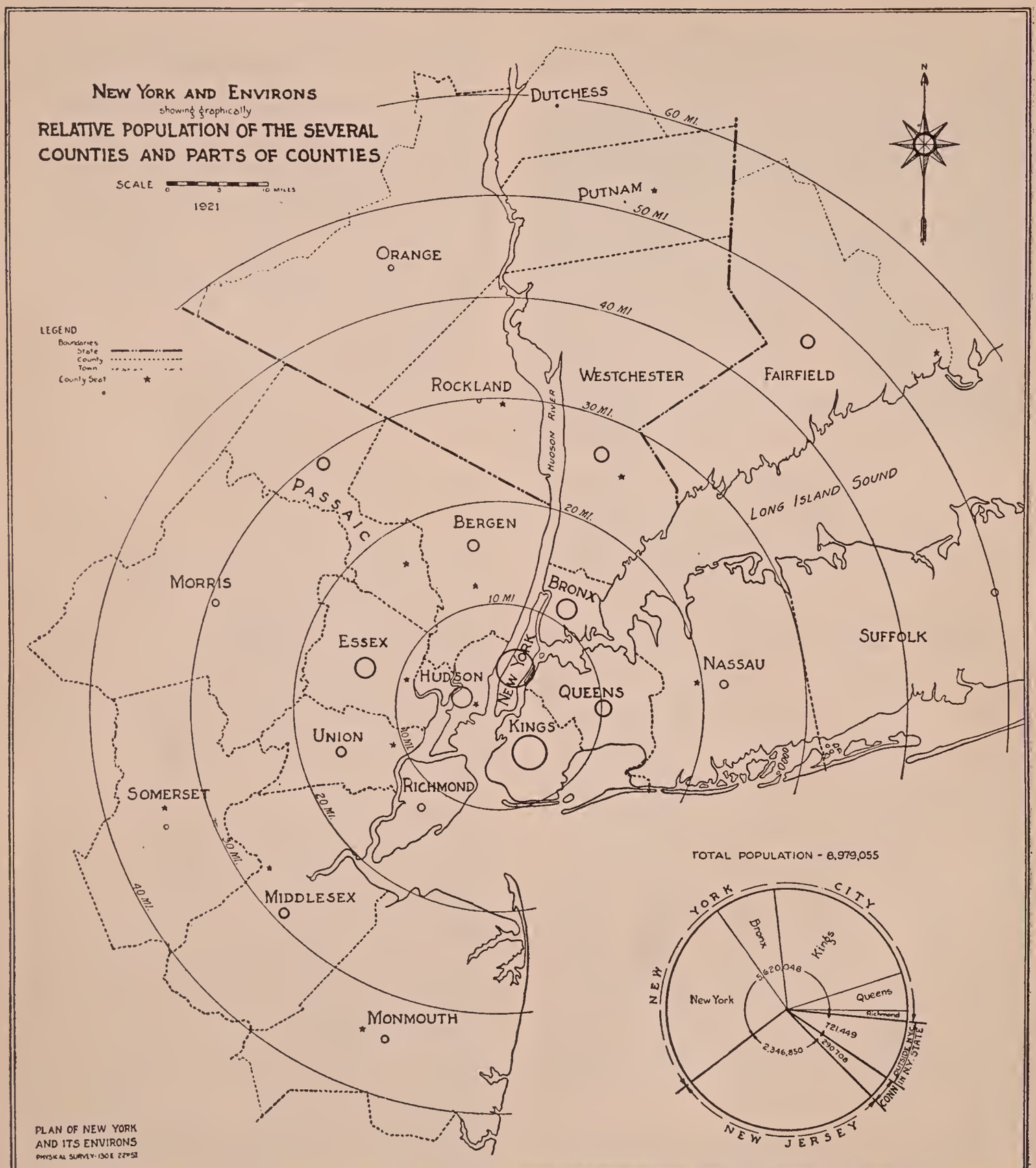
The school system of Paterson is made up of all types of schools to meet the needs of all its people. The Paterson State Normal School is also located in the city.

Towns Near Paterson.—Paterson is surrounded by small towns and cities. Hawthorne and Ridgewood are to the northeast. Ridgewood is one of the most beautiful home towns in this section. Ramsey is near Ridgewood. Pompton and Midvale are on one of the main highways about nine miles north and west of Paterson in the foothills of the Watchung Mountains. Little Falls is about four miles west of the city. A large carpet manufacturing plant is located there.

On the way between Paterson and Newark is Clifton, a rapidly growing city mostly given over to homes. Passaic bounds Clifton on the east. This city produces a great quantity of woolens, cotton goods, and other textiles. Nutley is near Passaic, as is Garfield, Wallington, Lodi, Rutherford, East Rutherford, and Hasbrouck Heights.

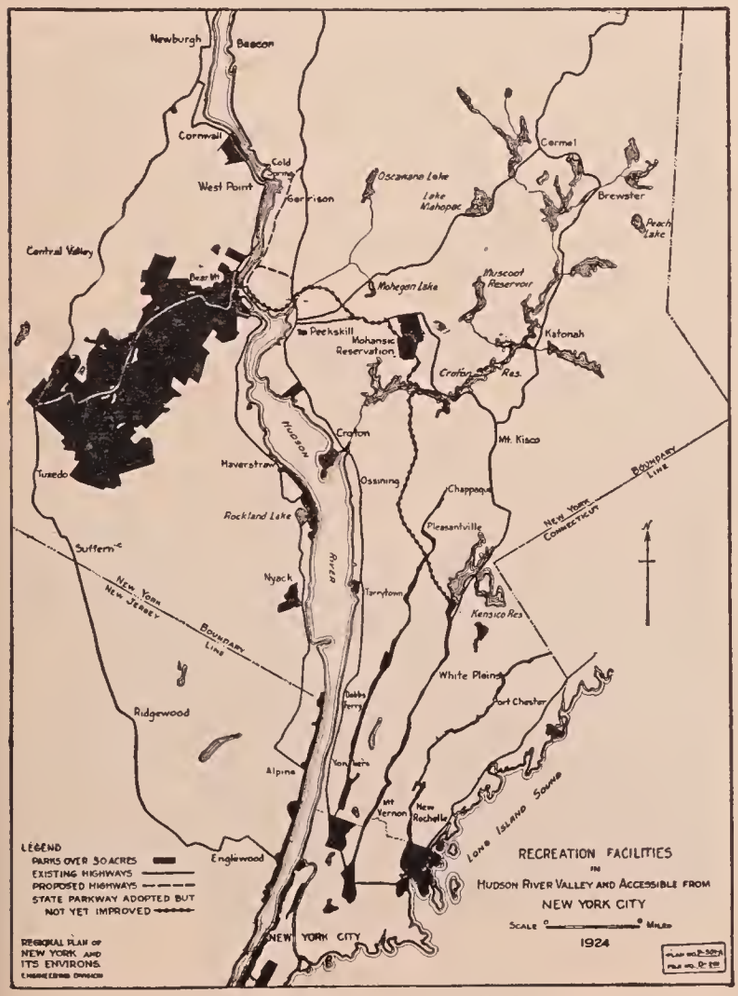
On the New York, Susquehanna, and Western Railroad, about five miles from Paterson toward New York, is Hackensack, the county seat of Bergen County. North of it are the villages of River Edge, West Englewood, Oradell, Bergenfield, Dumont, Park Ridge, Closter, and Westwood.

New York's Neighbors.—Besides all these cities and small communities are many others that are really included in the larger metropolitan district. Ease of transportation has made cities which were at one time far away in time and distance from New York near neighbors of that city. Men commute daily between Philadelphia and New York. A trip of days has been shortened to two hours. Fast trains, trolleys, and busses are helping each day to widen the boundaries of the area related closely to New York and its interests.



Courtesy of the Russell Sage Foundation.

Most important among such places are Perth Amboy and the towns along the shore as far south as Point Pleasant, New Brunswick, the county seat of Middlesex County, Rahway, Plainfield, Madison, and Morristown. Nyack is a town a few miles north of New York City on the Hudson River. Other cities along the Hudson are Haverstraw, West Point, and Newburgh.



Courtesy Russell Sage Foundation.

Recreational Facilities of New York.

West Point is the site of the United States Military Academy. Newburgh is rich in historic

Brown Bros.

Bear Mountain Inn.

scenes. Washington's headquarters there is one of the best museums of historic relics.[1]

The Playground of Metropolitan New York.—On the west side of the Hudson River extending from Fort Lee, New Jersey, almost to Newburgh is the Palisade Interstate Park. The New Jersey section of this park is a narrow strip of land along the Palisades 1,060 acres in extent. In New York State the park space includes 36,407 acres.

Most important of this area is

[1] A complete list of all towns and cities in the metropolitan districts may be found on pages 151-154.

Bear Mountain Park. This park is rapidly becoming the recreation ground for thousands of pleasure seekers. In the summer, boy and girl scouts, the Y.M.C.A., the Y.W.C.A., and many other societies, business firms, and private families find camping space available for their use. There is opportunity for fishing, boating, canoeing, and swimming, besides the hundreds of trails loved by hikers. In the winter the sport lover may enjoy skiing, skating, tobogganing, and snowshoeing.

On Thanksgiving Day, 1924, the bridge across the Hudson River from Anthony's Nose to Bear Mountain was opened. This bridge opens the way for automobiles to reach the park without the inconvenience of ferrying. With much of the trouble removed from the trip, it is predicted that Bear Mountain visitors will rapidly increase in numbers. In 1924 about three million people visited the park.

Mention is made elsewhere in this book of other proposed Hudson River bridges, particularly at or near One Hundred Seventy-eighth Street, New York, and Fort Lee, New Jersey. When this bridge is completed, the Interstate Park will be so easily accessible that with an hour or so of travel the city family may establish a camp site in the mountains.

Questions

I. Why might it be well to include some of the near-by New Jersey cities within New York City?

II. What are some of the advantages of Newark's location?

III. Why would you expect to find fine residential towns in New Jersey?

IV. Bayonne has an ideal location for oil refineries. Explain.

V. Jersey City is the site of a great soap manufacturing plant. Why?

VI. Why is Paterson a "City of Mills"?

VII. What is the advantage of having a wildwood near the city?

CHAPTER V

The Metropolitan District in New York State

Cities and Towns North of New York City.—East of the Hudson River and bounding New York on the north is the city of Yonkers. This city is the sixth city in size in the state of New York. It is the largest city outside of New York City itself east of the Hudson in the metropolitan district. It is within the limits of the Port Authority area, and its future will, no doubt, be affected by the plans of that Commission.

Brown Bros.

Philipse Manor, Yonkers, a building rich in historic scenes.

Brown Bros.

Getty Square in Yonkers.

Yonkers has its own water system, an excellent fire and police department, and a complete system of schools. It ranks fifth in value of manufactured goods among the cities of the state. Large carpet, hat, and sugar factories are located there.

Three main line railways traverse Yonkers. Many trolley lines and bus routes furnish easy means of travel to New York City and surrounding towns. Being so near New York City, this city has fine prospects as a manufacturing center, also as a place of residence.

North of Yonkers are many beautiful residential towns and villages. Among these are Hastings, Irvington, Larchmont, Ma-

A railroad yard on Long Island.

maroneck, Dobbs Ferry, Tarrytown, North Tarrytown, and many others, not large in population but important because of the many fine homes and estates within their borders. Broadway continues far up the river side, and along its course are Ossining, Peekskill, Fishkill, and Poughkeepsie.

Next in size to Yonkers in the section just north of New York City is Mount Vernon. This city is the home of many families who work in New York. There are some important manufacturing plants there also. New Rochelle and Pelham Manor are east of Mount Vernon. They are largely residential centers. Westchester County is covered with beautiful towns and estates. A complete list of the towns is found in the Appendix, page 152.

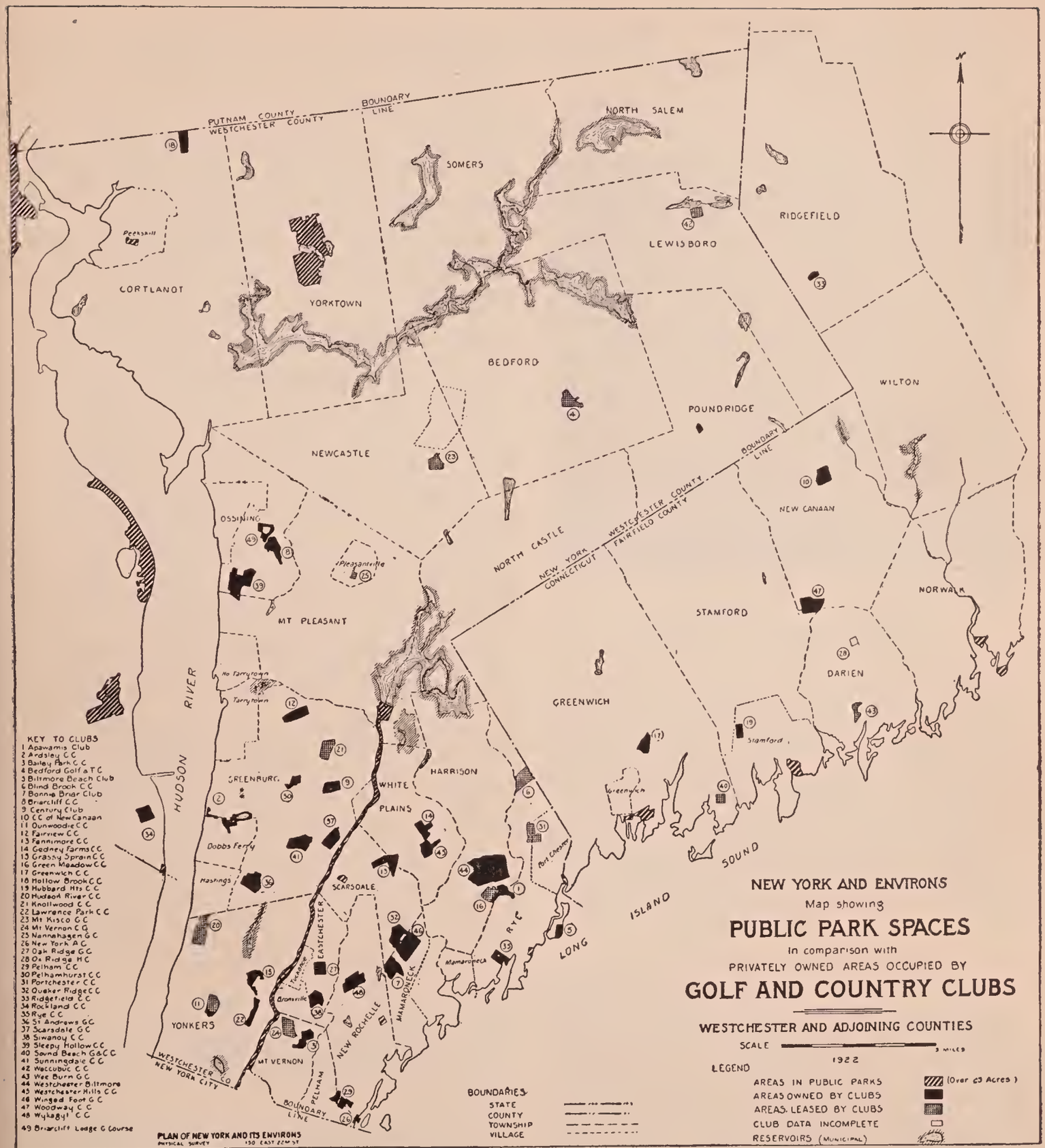
This section is also the playground of many New York business people. The rolling hills are the sites of many public and private golf grounds. It is, indeed, fortunate to have such beautiful country available for homes and play places so near a large city.

Long Island Suburbs.—In Nassau County on Long Island, the city has extended itself (if not by boundary) by the interest of its

Brown Bros.

The grave of Theodore Roosevelt.

people in home sites away from the busy city streets. In some of the Long Island suburbs are to be found many beautiful estates.



Courtesy Russell Sage Foundation.

Play places north of New York City on the east side of the Hudson River.

Oyster Bay, notable because it was the home of Theodore Roosevelt, is a place of fine homes. Many admirers of the great American have traveled to Oyster Bay to visit his burial place which is marked by only a simple stone. Really great men do not need great stone monuments to remind us that they have lived among us.

Mineola is the site of an aerial field. Garden City is a publishing center. Many of the larger towns have some manufacturing plants. Many are near enough the waterfront to be good places for summer resorts.

New Yorkers in Connecticut.—Although Connecticut is outside of any boundaries given for the metropolitan district, a part of Fairfield County has been chosen by many New Yorkers as a good place in which to build homes. Many business men commute regularly from some of the cities in Connecticut.

Some of the best highways lead directly from New York into Connecticut, and automobiles are continually shortening the distance between the city and many good home sites in that state.

New York and Its Suburbs Closely Related.—Travel around New York City through the many towns that help to make up the metropolitan district, and you will find a host of people who divide their interests between the New Jersey and the New York State towns, villages, and cities and New York City. On another page you will find an account of the number of commuters. Business men in Paterson, Newark, Passaic, Yonkers, and other cities have offices in New York. We could not have the central city without the many communities outside the city, nor would there be reasons for the many smaller towns and cities that we have written about if it were not for the large city as a center of interest.

Questions

I. What is meant by the Metropolitan district?

II. What is meant by the "Port Authority"?

III. Give three reasons why Yonkers is spoken of as well located.

IV. Why do not great men need great stone monuments?

V. What is an aerial field?

VI. Why is Garden City a publishing center?

VII. Do you know any one residing in the places discussed in the last two chapters? If you were to visit them, tell how you would go there.

CHAPTER VI

The Life of the People

New York Bay Attracts a Great Population.—Thus far we have discussed some of the history, geography, and general facts about the land, waters, industries, and commerce of the various sections that make up the metropolitan district. All these facts are of value to us in thinking about the area. The reasons why people have gathered in such numbers around New York Bay and how they have improved the country found there should be known in order to go farther into the study of other questions that arise after the people have arrived.

The Simple Life.—When only a few families make up a community, life is very simple. Every one manages his own household. It may be that one neighbor borrows food or tools from another at times; or when there is much work to do, all the men in the group unite in doing it. This is the plan that was actually followed in early days.

There was a time when New York was a village. There were, in fact, various little groups scattered over Manhattan Island and the area making up the city and its suburbs. This condition continued for a long time. Nearly a hundred years after the Duke of York took the city from the Dutch, a traveler gives the following account of New York:

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A crowd at Times Square.

When New York Was a Garden.—"The streets do not run straight, as those of Philadelphia, and have considerable bendings; however, they are very spacious and well built, and most of them are paved, except in high places where it has

been found useless. In the chief streets there are trees planted, which in the summer give them a fine appearance, and during the excessive heat at that time form a cooling shade. I found it extremely pleasant to walk in the town, for it seemed quite like a garden.

"Most of the houses are built of brick, and are generally strong and neat, and several stories high. Some had, according to old architecture, turned the gable end toward the street, but the houses were altered in this respect. Many of the houses had a balcony on the roof on which the people used to sit in the evenings in the summer seasons; and from thence they had a pleasant view of a great part of the town, and likewise of part of the adjacent waters and the opposite shore. The roofs are commonly covered with tiles or shingles. The walls are whitewashed within, and I did not anywhere see hangings, with which the people in this country seem to be but little acquainted. The walls were quite covered with all sorts of drawings and pictures in small frames. On each side of the chimneys they had usually a sort of alcove; and the wall under the windows was wainscoted and had benches placed near it. The alcoves and all the woodwork were painted with a bluish gray color.

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The best way to travel in the early days.

"There are several churches in the town which deserve some attention. 1. The English Church, built in the year 1695, at the west end of (the) town, consisting of stone, and has a steeple with a bell. 2. The new Dutch Church, which is likewise built of stone, is pretty large and is provided with a steeple; it also has a clock, which is the only one in town.

"Toward the sea, on the extremity of the promontory, is a pretty good fortress, called Fort George, which entirely commands

the port and can defend the town, at least from a sudden attack on the sea side. Besides that, it is likewise secured on the north or toward the shore by a palisade, which, however (as for a considerable time the people have had nothing to fear from an enemy), is in many places in a very bad state of defense.

"There is no good water to be met with in the town itself, but at a little distance there is a large spring of good water, which the inhabitants take for their tea and for the uses of the kitchen. Those, however, who are less delicate in this point, make use of the water in the wells in town, though it be very bad. This want of good water lies heavy upon the horses of the strangers that come to this place; for they do not like to drink the water from the wells in the town." [1]

The Sportsman's Paradise.—New York of those days was little more than a good-sized town. The surrounding country, now occupied by a population of nearly ten millions, was in large part a wilderness. A writer of a few years earlier than the one who gave the above account describes the country around Manhattan as a sportsman's paradise. He said, "For wild beast there is Deer, Bear, Wolves, Foxes, Raccoons, Otters, Musquashes, and Skunks. Wild Fowl there is a great store of, as Turkeys, Heath-hens, Quails, Partridges, Pigeons, Cranes, Geese of several sorts, Brants, Widgeons, Teal, and divers others."

Upon the south shore of Long Island there were "store of Whales and Grampusses." Eastchester was noted for its vast number of wild ducks. Deer and bear as well as other small game were plentiful. Wolves and rattlesnakes were too plentiful. A bounty of thirty shillings was paid for wolf scalps. Mount Morris, in Harlem, was called by the Dutch Slang-Berg or Snake Hill. A stream in the section known as Edenwald, where these reptiles were found in great number, still bears the name of Rattlesnake Brook.

Village Life.—Life in this period was much as it is in small villages to-day. There was no call for a great system of cleaning streets. There were no sewers to dig. The telephone, telegraph, radio, steam railway, subway, trolley car, and

[1] From *Travels in North America,* by Peter Kalin, 1748.

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The City Hall of New York City in 1840.

automobile were not yet thought of. The need of them had not been felt. It is so with many things that go to make up the life of the city to-day.

The Early Schoolmaster.—An example of how far we have progressed from those days is suggested by the change in our schools beyond the school of early days. All of us know of the great plants that house our schools now, also of the work the teacher does in those schools. In 1661 a notice from the Court of Breuckelen (Brooklyn) "respectfully" required the services of a "Court messenger, to be occasionally employed in the village of Breuckelen and all around where he may be needed, as well to serve summons, as also to conduct the services of the Church, and to sing on Sundays, to take charge of the School, dig graves, etc., ring the Bell, and to perform whatever else might be needed."

The change along other lines since the days of this notice are just as great as in the schools.

Some of the matters that concern all who dwell in large centers of population are discussed in the succeeding chapters. The problems to be found in New York City are given most attention because there the problems are the greatest. Many things said of New York are true of the smaller cities in the metropolitan district except that they appear on a smaller scale. Every city and town in the area takes pride in keeping its streets clean, in paving its streets, caring for its needy, keeping its people healthy, and educating its boys and girls. Every community is doing its best to make its food and water supply good and as cheap in price as possible. Police and fire departments range in size from the army of men employed in New York City down to one policeman and a volunteer fire brigade.

Let us now turn to a study of some of the great problems dealt with in city management in the metropolitan district.

Questions

I. Name one street in New York which is famous for its twists and bendings.

II. What is the name of the "adjacent waters" on the east? On the west? On the south? On the north of Manhattan Island?

III. Why was life simple in the early days of New York?

IV. How does a village differ from a city?

CHAPTER VII

Keeping the City Clean

The Conflict with Dirt.—There is an endless conflict between the good housewife and the dirt, rubbish, and other waste that accumulates in her home. She cannot have a "Clean-up Week" and then sit down and enjoy herself. Every day must be a "cleaning" day. Armed with mop, scrub brush, broom, and dust cloth, Mrs. Smith, Mrs. Jones, and all the good housekeepers fight the enemies "Dirt and Waste."

Dirt is an enemy if it interferes with our health. Left-over scraps from the table are enemies if they are thrown out where they may attract flies and give off a bad odor. There must be some plan by which the housekeeper and the city can coöperate to get rid of all this waste that accumulates every day. New York City has such a plan, and it operates on a large scale indeed. More than a million homes put out enough waste each year to make a pile, if placed in City Hall Park, higher than the Woolworth Building Tower.

Kinds of Waste.—The waste from the homes, shops, and business places of various descriptions in the city may be divided into three parts: (1) garbage; (2) rubbish; and (3) ashes. Each of these must be disposed of in a way best suited to it.

Early Street Cleaners.—One hundred years ago hogs were allowed to roam at will on the city streets to eat up the garbage. It was contended that these scavengers were

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Flushing the street.

necessary because without them "the animal and vegetable matter thrown into streets would putrefy and taint the air." It is a long step from such a crude and unsanitary plan to the elaborate system of waste removal that we have to-day.

Street Cleaning To-day. — The Commissioner of Street Cleaning appointed by the Mayor is responsible for removal of all waste within the limits of Manhattan, The Bronx, and Brooklyn. In the other two boroughs, the borough presidents look after the business of waste removal.

Besides the removal of such waste as has been already mentioned, these officers look after the cleaning of the streets and removal of the street sweepings and litter, also the removal of snow and ice from the streets in the winter.

Preparing Waste for Removal.— In your home the waste must be prepared for removal by the Street Cleaning Department. It cannot be thrown out in the yard nor can it be placed on the sidewalk in all sorts of boxes, bundles, and packages. Every householder must remember that he is but one among many and that he should follow certain rules in putting out his waste stuff. Garbage should be placed in metal cans with tight-fitting covers. Ash cans should be of metal. The garbage and ash cans should not be filled more than within four inches from the top. All papers and other rubbish should be tied securely in neat bundles.

Collecting Waste.—Ashes and garbage are collected in separate vehicles. The one for garbage is a metal cart with a capacity of one and one-half cubic yards. The rubbish cart is a wooden cart with a capacity of seven and one-half cubic yards. Many motor vehicles are also used to cart away garbage and other waste. In Manhattan,

The Bronx, and Brooklyn, garbage is hauled to the waterfront, loaded on scows which are towed twenty

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Removing waste.

miles beyond Scotland Light and dumped at sea. Ashes from Manhattan and The Bronx are dumped on Riker's Island. From Brooklyn the ashes are hauled to Corona and dumped on low lands. In Manhattan and The Bronx the rubbish is scavenged by contractors, who pay the city for the privilege, and it is then taken to Riker's Island where it is burned. In Brooklyn a contractor takes the rubbish which is burned in furnaces.

Disposal of Waste.—The following table shows how waste is disposed of throughout the city:

GARBAGE—

Bronx—Loaded on scows and hauled to sea thirty miles away, beyond Scotland Lightship, and dumped.

Manhattan—Loaded on scows and hauled to sea thirty miles away, beyond Scotland Lightship, and dumped.

Brooklyn—Loaded on scows and hauled to sea thirty miles away, beyond Scotland Lightship, and dumped.

Queens—Burned in incinerators. Clinkers used for road building.

Richmond—Burned in incinerators. Clinkers used for road building.

ASHES—

Bronx—Dumped on Riker's Island.

Manhattan—Dumped on Riker's Island.

Brooklyn—City pays contractor to haul and dump.

Queens—Burned in incinerators. Clinkers used for road building.

Richmond—Burned in destructors, and used for road building or fills.

RUBBISH—

Bronx—Taken to Riker's Island and burned. City paid for scavenging by contractor.

Manhattan—Taken to Riker's Island and burned. City paid for scavenging by contractor.

Brooklyn—City pays contractor for hauling it. Burned in furnaces.

Queens—Burned in incinerators. Clinkers used for road building.

Richmond—Burned in incinerators. Clinkers used for road building.

DEAD ANIMALS—

Reduction plant on Barren Island. Con-

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Cleaning up a vacant lot.

tract with a company which pays city for the privilege.

The disposal of the waste presents many problems. The plants for burning rubbish must be well located so as to be convenient to various parts of the city. This is not always easily done. Bad odors must be eliminated. The whole plant must be carefully kept. Ashes must be dumped somewhere, but good dumping grounds are not always to be found in or near the city. It is true, however, that much of the land in the city where some of the finest buildings or great manufacturing plants are located is made land, having been filled in with ashes and other materials.

Made Land.—Some of the old maps show many ponds and streams on Manhattan Island. Not far north from where the City Hall now stands there was once a pond sixty feet deep. In 1796 the first trial of John Fitch's steamboat was held on this pond. The outlet of this pond was a canal that is now the site of Canal Street. Near the pond were stretches of meadow land that was fine for snipe shooting. A great deal of the waterfront sections are filled in land. At Thirty-third Street and Fourth Avenue, where a huge business building is to be erected, was Sunfish Pond.

Saw Mill Creek rose between Forty-ninth and Fiftieth streets west of Sixth Avenue and flowed southeast to the East River at Forty-sixth Street. Where this creek crossed Fifth Avenue there was a pond. On this spot a large banking and office building now stands.

Another famous skating ground as late as 1850 was at the southwest corner of Central Park and Fifth Avenue.

There is still real low land in various parts of the city that must be filled before it can be used for building purposes. When it is

filled it will become valuable, and within a few years will, no doubt, be the building site of other great buildings as large and even larger than those in New York City to-day.

Litter on the Streets.—Not only must waste be disposed of but the streets must be kept clean. Receptacles are placed here and there so people may have a place to deposit their newspapers, fruit peelings, and other litter. It is unfortunate, however, that so many forget their home manners. They throw papers about and do many things on the streets that they never think of doing in their own homes. Every bit of carelessness that adds to the burden of the street cleaners must be paid for in extra taxes, so we pay for our own carelessness after all.

A great deal of the cleaning of the streets is done by hand sweeping. We call the sweepers "white wings." Each sweeper is responsible for the cleaning of a certain number of streets.

School children have a good opportunity to act the part of junior citizens in the various leagues that have been formed in the schools to coöperate with the cleaners in keeping the neighborhoods free from litter and trash and cleaning out unsightly places.

Street Flushing.—Just as the scrub brush is necessary in the home, so the brush and water is needed in the streets. Hand flushing with a hose is the simplest way to wash the streets. This loosens up the dirt and cleans the pavement of dirt that cannot be easily swept away.

The housekeeper has the vacuum cleaner that brushes the dirt loose and then cleans it out of the rugs or off the floors. The street cleaning department has the "Squeegee," a power machine that is really a series of scrubbing brushes on wheels. The machine sprinkles the street and brushes it at the same time. It is a combination flusher and sweeper. Other types of power sweeping machines are also used.

Much of the machine cleaning is done at night when the streets are clear of traffic.

If all citizens were to observe the street cleaning department's work until they realized how much must be done to keep the city clean, it is certain that they would agree that of all the many signs in New York and other cities the largest and most numerous, so

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Hauling away snow.

placed that all might read as they run, should be "Keep the Streets Clean."

Much dirt and trash found on the street is "avoidable" dirt and should be so regarded. Not so, however, with the snow.

Removal of Snow.—Snow in the open country is beautiful. It is a fine covering for the wintering crops, and outside of the few paths that must be cleaned, it means little to the country dweller. In a city like New York, however, except in the parks, snow is a nuisance to be disposed of as soon as possible. Traffic must be kept moving or the business of the city is seriously affected. A traffic tie-up would within a few days mean a hungry city, a dirty city, and an unhealthy city.

The present plan of getting rid of the snow is by "snow fighting." The names and addresses of all available men for snow fighting are collected in the summer and kept on file so they may be called out by the Police Department when needed.

Snowplows are used to clean the center of the streets. The snow is piled and then either carted away or the manholes of the sewers are opened and the snow is dumped into the sewers. About one-third of the area in the most populous boroughs is cleaned in this way.

Sewers and Sewage.—Besides the waste of the streets, the liquid waste of the thousands of homes in the city must be carried away. To take care of all this there are more than twenty-eight hundred miles of sewers, enough to construct a sewer nearly from coast to coast across the United States. The sewage flows through the sewers and empties into the tidal waters around the city. Thus far little thought has been given to the purification of the sewage or methods of treating it so as to stop the pollution of the waters near the city. With all the other excellent health work in the city, it

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Children at work beautifying school grounds.

seems strange that one of the greatest menaces to the city's welfare should be left with so little done to improve conditions.

With the poisonous sewage flowing into the shore waters, bathing and shell-fish culture are unsafe. All floating and other public baths have been closed by order of the Board of Health for this reason.

Several plans have been proposed to remedy the evil effects of the sewage in the harbor waters. Sewage treatment plants are being constructed. These plants will divert the sewage from the harbor and take away the poisonous effect that it has now. Such plants cost large amounts of money and require considerable space, so it will be several years before the city can meet the problem of sewage pollution as it should be met.

Every Day a Clean-up Day.—This big job of "house cleaning" must continue day after day the year round. The sweeper who cleans his allotted streets to-day knows that another day will bring another lot of dirt and litter. Rubbish and ashes accumulate and must be removed. As long as the machinery of the Street Cleaning Department runs smoothly, the average citizen takes little notice of its work. Too often we are thoughtless about cleanliness in the city because everything is taken care of for us.

Questions

I. Give five ways in which you can help the street cleaning department.

II. Why is garbage taken so far out to sea?

III. Why do contractors find it worth while to pay for the privilege of sorting rubbish?

IV. Why is snow a nuisance in the city?

V. What are the dangers that may arise from sewage in the river and harbor waters?

VI. How can you help to keep the city clean?

CHAPTER VIII

The Care of Life and Property

The Guardians of Public Safety.— For whom do we immediately look in case of an accident, when there is a traffic jam, or when help is needed for any purpose on the city street? Every city dweller, except the criminal or the one who may be trying to break the law in some way, knows that his best friend in case of need is the policeman. The policeman is always at our call. There are no vacation periods when all the police force leaves town, nor are there strikes when all lay off for an increase in pay or for some other reason. President Coolidge made it plain when he was governor of Massachusetts that there should be no strikes of the police force. He said, at the time when there was a threatened strike of the police in Boston, that "There is no right to strike against the public safety by anybody, anywhere, at any time."

"Public Safety" is the reason for police forces. To look after the safety of a city as large as New York requires a small army of men and women.

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A lesson in identification for policemen and detectives.

The Police Department. — The chief executive officer of the Police Department is the Commissioner, appointed by the Mayor for a term of five years.

The Patrolman.—The one in the Department who comes nearest to the life of the average citizen is the patrolman. The patrolman is at the call of the householder if there is serious trouble. He is usually the first to give aid in case of accident. The fact that he is present goes far in keeping the criminal away from the neighbor-

hood. He arrests the offender caught breaking the law. Last, but not least, the patrolman directs the city traffic so business may be carried on and the life of the pedestrian made safe.

Of course, one man cannot be expected to do all of what we have outlined. In order to properly care for the different needs, the police force is divided up into various squads, and each squad is especially trained for its particular work.

Regulating Traffic.—In the busy sections of New York the regulation of traffic is a serious matter. With the rapid growth of the city and the increase in the number of automobiles and trucks, some of the principal streets become literally clogged with vehicles. To remedy this, in August, 1918, a plan of distributing the traffic throughout Manhattan was made. By this plan certain north and south avenues were given over to passenger vehicles, while others were assigned to the commercial vehicles. Certain of the cross-town streets were made one-way streets.

Car-stop safety zones have been placed in the streets to protect passengers while boarding or alighting from street cars. In many busy streets safety aisles have been placed. These aisles prevent collisions of vehicles. They also furnish a safe place for the people crossing the streets. In many sections where traffic interferes with play on the streets, the streets are closed during certain hours of the day and the children are allowed to play under the direction of a policeman.

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Fifth Avenue north from Thirty-third Street. A traffic tower is in the foreground.

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A safe crossing.

On Fifth Avenue (and other avenues) signal towers have been placed, and the traffic is regulated by a system of lights controlled by men in these towers.

Special Police Squads.—The marine squad patrols the harbor and river-front waters, and watches for thieves and other offenders that cannot be watched by the patrolmen on land.

There is often need of haste in overtaking speeding automobiles, fleeing criminals, etc. The motorcycle squad is provided for this work.

Besides these divisions of the police force, there is the bomb squad, the industrial squad that makes itself familiar with labor problems. In case of strikes this squad enforces the law against unfair tactics and the work of professional leaders who lend their aid to cause as much trouble as possible.

The gangs of thieves and other criminals are watched by the gangster squad. This squad raids the gang headquarters when some of its members are suspected. Counterfeiting and bootlegging gangs receive the special attention of this squad.

One of the most important branches of the service is the Bureau of Missing Persons. This department has a world-wide reputation and receives appeals from all over the world. Recently descriptions of missing persons have been broadcasted from the Municipal Broadcasting Station WNYC.

Identification of Criminals. — A very useful department, the purpose of which is to keep records of criminals, is maintained at the police headquarters. In this department is to be found the "rogues' gallery," a complete file of photographs of men and women who have committed crimes. There are also finger-print records. By these means a criminal arrested anywhere may be identified. It has recently become possible to send finger-print impressions by radio, so the work of identification

will be easy no matter where the criminal may be found. With such records always available many crimes will be prevented that otherwise would be committed if the offender knew he could not be identified if caught. Every criminal knows that a second, third, or fourth offense means a long term of imprisonment.

Licenses and Permits.—The Police Department has a wide range of duties besides those mentioned. One department passes on the license application of engineers and firemen in industrial plants in New York City. Permits of various kinds are also issued by the police.

Education of Drivers.—In order to reduce the number of street accidents, the Public Safety Bureau was organized in 1923. The work of this bureau is to educate drivers of automobiles and others through lectures, printed rules, etc., how to avoid doing the wrong thing.

The Training of Policemen.—With all these duties and responsibilities the members of the police force must be trained in some manner if they are to do their work well. Such a training is provided in the Training School. As soon as a policeman is appointed for a trial period of six months, he is sent to school. Here he is put through a rigid course of instruction, both mental and physical, until he is able to pass the required examinations. In this school the patrolman is taught the meaning of the rules and regulations of the department. He is taught how to handle a revolver; the reading of finger prints is explained to him; he is taught to make out all sorts of papers required in court procedures where he may be concerned.

You can see from all this why New York has such an excellent police force. A parade of the New York police is equal to a parade of the finest soldiers. They are, indeed, a "Peace Army," always prepared to protect the citizen's life and property.

Fire Losses.—The annual loss by fire in the United States is enough to build nearly as many schools at a million dollars each as there are elementary schools in all the boroughs of New York City outside Manhattan. This loss is enough to build twenty thousand houses, with fifty-foot lots, at five thousand dollars each, on both sides of a street thirty-seven miles long, making no allowance for cross

streets. It would pay for building a dozen bridges like Brooklyn Bridge. Somewhere all the time, in our country, some one is fighting fire. It may be a little blaze that does a few dollars' worth of damage, a school building in the country where thirty-three people lost their lives, as in the case of the Oklahoma school at Christmas time in 1894, or a great pier fire as in Jersey City in December, 1924, where over a million dollars' worth of property was destroyed.

New York City is no exception. Fires are frequent and as costly in New York as elsewhere. Any

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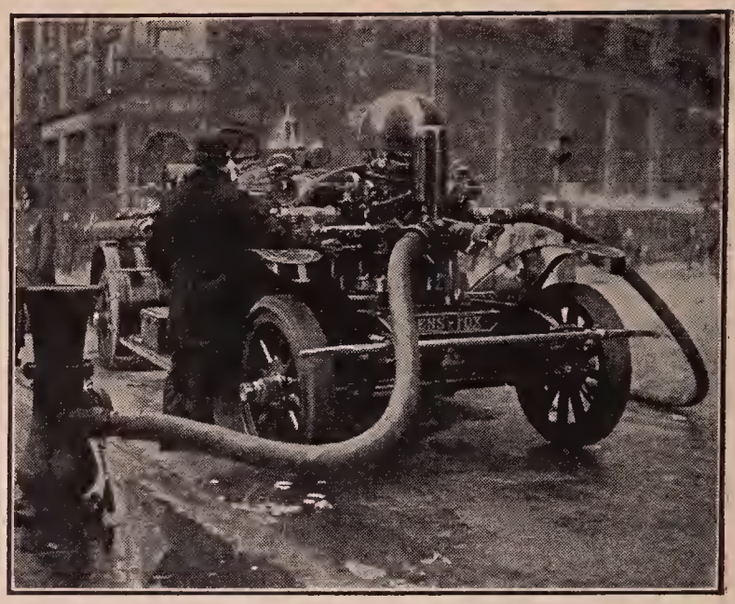
Firemen must know how to rescue fire victims.

daily newspaper of any issue will give you an account of destructive fires.



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An excellent type of fire engine.

The Fire Department.—The police are aided in their work of life and property protection by the Fire Department. There was a time, and that time was very recent, when there was no fire protection except by volunteer fire fighters. The Fire Department to-day consists of more than six thousand men thoroughly trained in fire fighting. Like the police, these men are carefully selected. They must pass a civil service examination first of all. Then they must pass a physical examination. If they are selected, they are appointed on trial and are required to attend a school where instruction is given in the different things that a good fireman must know—how to use ladders, ropes, and

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The Rescue Squad at work.

hose; how to jump into a life net, use a scaling ladder, and how to make a rescue.

Old pictures show the fire horses galloping madly through the streets to the scene of the fire. That was a fine sight and was the best that could be done in early days. Now all apparatus is mounted on motor trucks. There is no delay in getting to the fire at a greater speed than the best of the horses could make.

Putting out the fire is not all of fire fighting. Many of our stories of heroism are based upon rescues made by the brave firemen when it seemed that it was impossible to save the person shut off from escape by the fire. Saving human life is a great part of the service rendered the citizens by the Fire Department.

At the head of this department is the Fire Commissioner appointed by the Mayor.

Paying Fire Losses.—Who pays the fire loss? All of us. The burned building may have been insured, but some one must furnish the money to pay for the loss. The money paid for fire insurance each year in this country amounts to over a billion dollars. This money is paid by the citizens to the tradesman who considers his insurance premiums a part of his

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Scaling a wall by means of a rope. A lesson for firemen.

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A lesson in the sending of a fire alarm.

expenses which he meets by charging a trifle more for his goods.

Fire Prevention.—As in everything else every one must do his part in prevention before he can be helped. Many fires are caused by carelessness. They are "preventable fires." Buildings are built carelessly. There are open shafts, wooden stairways, poor wiring, etc. In some plants there is poor housekeeping. The stock is carelessly stored, and if it is easily inflammable it does not take much to start a fire. The Bureau of Fire Prevention looks after such matters. This bureau also looks after the installation of fire escapes and fire drills in factories, stores, and schools. This same bureau, through the "Fire Marshals," investigates fires. A careful examination of the burned premises is made and filed. Such an examination acts as a check against many fires caused by persons who might start a fire if it were not for the fear of arrest and imprisonment.

Fire prevention has been taught during the last few years in schools, homes, churches, and everywhere that people meet. In spite of all this fires continue, but we hope not so frequently as otherwise. Some of the rules that all should follow to help prevent fires are:

1. Do not use matches carelessly.
2. Clean stovepipes and chimneys frequently.
3. Protect the floor under stoves with metal or other non-inflammable material.
4. Protect walls near stoves or furnace pipes with some covering.
5. Do not allow inflammable rubbish, paper, broken furniture, etc., to accumulate in the attic or cellar. Place such stuff in bundles or containers and have it removed by the Street Cleaning Department.
6. Place all oily rags in metal containers with a tight top.
7. Smokers should not throw away carelessly matches, lighted cigars, or cigarettes.

8. Know where the nearest fire-alarm box to your house is located.
9. Disconnect electric irons after using.
10. Do not block fire escapes with rubbish, etc.
11. Know the fire exits of the building in which you live.
12. Do not go into a dark closet with a lighted match or candle.
13. Do not light fires with kerosene or gasoline.
14. Do not use lighted candles on Christmas trees.
15. Keep curtains away from open gas flames.
16. Do not look for gas leaks with a match or candle.

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A parade of the New York City police.

Cautions in Case of Fire.—There are other cautions to be observed. Each home has its own problem in preventing fires.

A fire usually causes fright, and life and property is often lost where a little cool-headed action would help people to escape and perhaps save the building from destruction.

If caught in a burning building, try not to frighten others into a panic by shouting "Fire!" If there is a fire extinguisher near, you may extinguish the fire before it gains much headway. Do not open doors or windows that will cause a draft. If the fire is in a room of a dwelling and there are no means at hand to extinguish it, all doors of that room should be kept closed if possible until the Fire Department arrives.

In case of discovery of a fire at any time always turn in an alarm. Every citizen should know how to operate a fire-alarm box.

Questions

I. What might be the result of a strike of the police force?

II. Explain the term, "Public Safety."

III. Make a list of ten "don'ts" that will aid in fire prevention.

IV. Where is the fire-alarm box nearest your home or school?

V. Who pays for fire losses? Explain.

VI. Did a policeman ever help you in any way? Explain.

CHAPTER IX

A Giant Schoolhouse

A Host to Educate.—There are over a million school children in New York City and five million adults. Every one of this vast army of people may find some place in the city where they may attend school. Not exactly the school that we usually think of when we speak of "the city schools" but nevertheless a school.

The Giant School House, The Museum of Natural History.

A School Without Books.—What has been called the greatest schoolhouse on earth is pictured on this page. Here, in this wonderful building, the largest of its kind in the city, are to be seen over three and one-half million different objects. If it were possible to look at three thousand objects per day, it would take twelve hundred days to view them all.

The Natural History Museum is a schoolhouse where lectures are attended by about eighty thousand children in a single year. Nature study collections are furnished the public schools. Special study collections are provided for the blind and adults of New York City and other cities.

In this schoolhouse the book is replaced by the thing itself. You

Courtesy Natural History Museum.

Wild bird life as shown in the bird section of the Natural History Museum.

Courtesy Natural History Museum.

The beaver dam in the Natural History Museum.

may see the Indians of Manhattan, Indians of the plains and woodlands, the buffalo hunters, and the cliff dwellers. Here are all the birds of the air, animals of the forests, and the fish of all ages from the seas. How real is the story of Peary's discovery of the North Pole when you see Peary's dogs, his sledge, and the route that he followed shown on a massive globe. The great Panama Canal is shown by a small reproduction. You may see the disease-carrying flea, mosquito, and fly, and learn how the victory was won against yellow fever and other terrible diseases.

From this wonderful schoolhouse in the heart of a great city you may travel to all the wild regions and secret places of the earth. What a treasure house at our own door! Best of all, it is free every day to all who wish to view its wonders.

Art Treasures.—The Metropolitan Museum of Art is another schoolhouse where you may learn by seeing. In this museum collections that show the history of painting and other works of art of all countries are exhibited. To explain the collections to the children, story hours are held on Saturday mornings and Sunday afternoons. Other lectures are given for high school students and pupils of special schools. Lantern slides, casts, photographs, post

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The Metropolitan Museum of Art on Fifth Avenue.

cards, etc., are loaned free to schools and clubs. Study hours are also held for salespeople, designers, and manufacturers.

What a great privilege! Have you ever used a Saturday holiday to visit either of these museums?

Permission New York Zoological Society.

One of the many scenes to be found at the Aquarium.

Fish from All the Seas.—Besides these two great museums, the city maintains the Aquarium in Battery Park. The Aquarium building was at first a fort connected with Battery Park by a bridge. In 1823 it was ceded by Congress to New York City. It was used as a place of amusement and called Castle Garden. From 1855 to 1890 it was used as a landing place for immigrants. When Ellis Island was made the immigrant landing station in 1890, the old fort was remodeled, and in 1896 it became the home of the Aquarium.

Here, face to face, fish from all the seas may be seen. There are seven floor pools, where all sorts of water inhabitants from small turtles to crocodiles may be viewed. A fish hatchery maintained as an exhibit furnishes millions of young food and game fishes for rivers and lakes in New York State every year.

The Animal World Brought to the City.—Take a trip to the Zoological Park in The Bronx. Here again the animal world is brought to the

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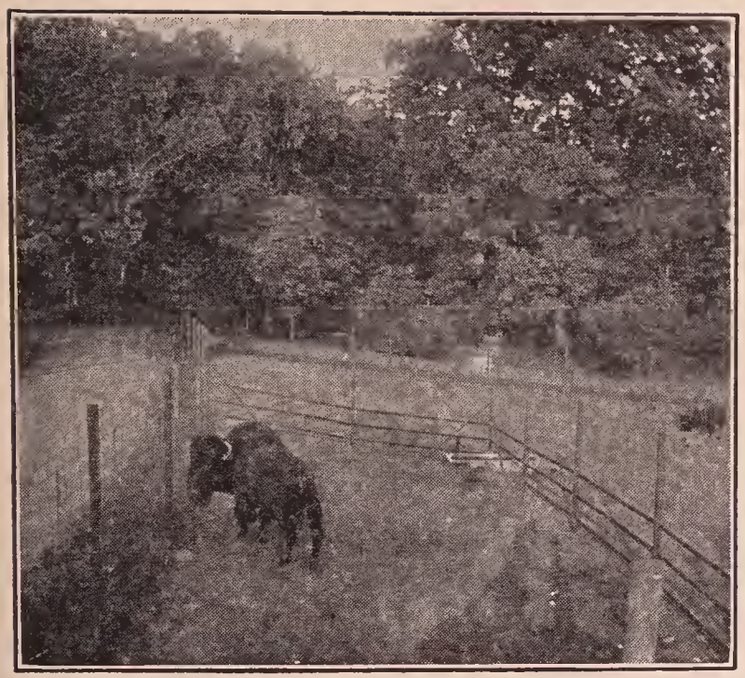
Botanical Building, Bronx Park.



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A corner of the buffalo pen in Bronx Park.

city—not in a glass cage, however, as in the Museum of Natural History, but in flesh and blood. Bears, buffaloes, deer, and other wild animals are in large enclosed spaces. The monkeys have roomy cages; the sea lions may be seen in their large tank; there are hundreds of birds in large cages. A late census of the New York Zoological Park gives the following facts. More specimens are being added every day.

Mammals ..	196 Species	629 Specimens
Birds	797 Species	2412 Specimens
Reptiles and Amphibians	85 Species	465 Specimens
Total ...	1078 Species	3506 Specimens

In Central Park on a smaller scale is another collection of animals and birds.

There are many other museums scattered about the city. The Brooklyn Institute of Arts and Sciences serves the public and the schools as does the Museum of Natural History.

The Public School.—For the children of school age, New York City provides a complete system of schools.

The Board of Education of New York City is composed of seven members appointed by the Mayor. Two members are selected from each of the two larger boroughs and one each from the smaller boroughs. The term of office of the Board members is seven years. The city is divided into forty-six school districts, each having its own school board of five members.

The direct management of the schools rests with the Board of Superintendents, made up of the City Superintendent of Schools and eight associate superintendents appointed by the Board of Education for six years. There are also twenty-seven district superintendents selected by the Board of Superintendents.

Every Child Provided For. —

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George Washington High School, New York City.

Every year of the school life of every boy and girl is provided for. Besides the ordinary elementary schools, there are the kindergartens for the children too young for the first grade. Training is given in the schools in machine-shop practice, sheet metal work, electric wiring, plumbing, printing, sign painting, trade drawing, woodworking, government designing, book binding, millinery, dressmaking, power machine operating, pottery making, novelty work, and home making. Indeed, what was once thought of as the essentials of a school—reading, writing, and arithmetic—form a small part of the big field covered by our modern schools.

All sorts of special classes are to be found in the city schools. There are classes for those who are weak mentally or physically, for the foreign born, for those who can advance more rapidly than others, for the blind, the deaf, and the crippled, and also for those who are defective in speech.

Besides the elementary schools, the junior high schools, and the high schools, there are three training schools for teachers—one in Manhattan, one in Brooklyn, and one in Queens.

There are three trade schools for boys. The Manhattan Trade School for Girls is open to graduates of elementary schools or to those who are fourteen years of age and have enough education to profit from the instruction in the trade school.

For the boys and girls who have left school for the trades, department stores, hotels, and shops, continuation schools are provided. These employees attend classes a few hours each week.

School at Night. — Evening schools are open to the many youths and adults who have no other opportunity to attend school. A complete education as offered in the day schools may be obtained

in these evening schools. Much of the work of instructing the foreign born in the English language is done in the evening classes. Many of the prominent men of New York to-day first learned the English language in an evening class.

The Bureau of Lectures conducts a system of lectures on various subjects in the schools and other places for the benefit of the adult public.

No one is missed by Father Knickerbocker in his attempt to educate his children.

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The Hall of Fame, New York University.

Colleges and Universities.—The graduates of the high schools of the city find at their door some of the great universities of the nation. Hunter College gives free education to women residents of the city. Other institutions are Columbia University, founded in 1754 as King's College, The College of the City of New York, New York University, Fordham University, and many others.

The city and state have been good to the boys and girls. It has long been known that the first necessity of success is education. If the city is to succeed, all of its citizens must have some education, so laws regulating school attendance have been passed. It would seem that with the museums, parks, and schools open for those who may come, there would be no need of a department to enforce attendance, but such is not the case.

School Attendance Enforced.—The city maintains a department to enforce the compulsory school attendance law. For those who will not attend otherwise, truant schools are maintained for both boys and girls.

Libraries an Aid to the Schools.—We should not leave the subject of education without mentioning one of the greatest aids to education in the city—the public libraries. Do you wish a book on any subject to help in your history work? Does

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The Public Library at Fifth Avenue and Forty-second Street, New York City. This is one of the most beautiful buildings in the city.

the housewife want to get information on some subject about housekeeping? The tradesman wishes to find some facts about his business. Perhaps the city employee wants to see a city report. Where are these books to be found? In the libraries. Every kind of book, map, and thousands of pictures are to be found in the public libraries.

There are three public library systems in the city of New York: (1) the New York Public Library; (2) the Brooklyn Public Library; (3) the Queens Borough Public Library. These three systems maintain ninety-four branches all the way from Tottenville, Staten Island, to Kingsbridge Avenue in The Bronx, a distance of forty miles.

The central building of the New York Public Library is at Fifth Avenue and Forty-second Street. The building opened in 1911. Its construction cost nine million dollars. Of all the wonderful buildings in New York, many think it the finest. In addition to the general reading room there is an ex-

tensive picture gallery. There are also special reading rooms for American history, art, music; Slavonic, Jewish, and Oriental literature; science, newspapers, maps, and other subjects. More than seven thousand people visit this library every day. It is open to every one free of charge. A wonderful privilege indeed.

Truly the city of New York has provided opportunities to all who wish to spend their leisure time profitably. If they wish for pleasure, the story in the next chapter will meet their needs.

Questions

I. Why is the Museum of Natural History a "Giant Schoolhouse"?

II. What is a "complete" system of schools?

III. What is a compulsory education law? Why is it needed?

IV. How does the library aid you?

V. Explain the term "learning by seeing."

VI. What museums have you visited? What did you learn there?

CHAPTER X

Play Places

The Need of Play.—"All work and no play makes Jack a dull boy."

It is well enough to talk about the importance of industries and the necessity of schools. The city would not be a progressive city without them. Neither would it be a pleasant city to live in if no one could ever look forward to a play spell. We all like to play. We forget the cares of the day and are prepared cheerfully to attack the next job that we may meet.

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A city playground.

What is play? Whatever is enough different from our regular work to give pleasure may be called play. It may be a game of ball for the boy, golf for a man, tennis for a girl, or, indeed, to some it may be deep study in the library.

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The Education Building at Albany.

The Value of Play.—Play is called recreation because it refreshes us and rests us from our daily work. The city fathers know the value of recreation, and all sorts of ways are provided for amusement and pleasure. It is known that the manner in which children amuse themselves does much to determine what kind of men and women they are to be. Knowing this, every possible effort is made to have a happy, healthy, contented people.

Good Places to Play.—Fun that pays comes from a visit to the Aquarium. You can enjoy gazing into the wondering eyes of the many queer fish. You also can carry away with you a host of ideas about the different kinds of fish.

The Zoological Park is always filled with children. It is real fun to walk and be out in the open if there is a polar bear around the next corner or a cage of monkeys at the end of the park a mile away.

The head of the Department of Parks is the Park Board, which consists of five commissioners appointed by the Mayor, one commissioner for each of the five boroughs. The Park Board controls 8,500 acres of park land, maintains one hundred twenty miles of parkway, and operates one hundred eight playgrounds and nine recreational piers in addition to public baths and bathing beaches.

Park land is devoted to a great many different uses. Some of the parks have broad stretches of woodlands where beautiful drives and walks may be laid out. There are five public golf links in the parks. In several parks there are public tennis courts and baseball

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The board walk at Coney Island.

diamonds. Other games, like basket ball, cricket, polo, skating, croquet, bowling on the green, field hockey, etc., are provided.

Over one hundred playgrounds are maintained. One of the most modern and best equipped of these is the Betsey Head Playground, located in a very densely populated section of Brooklyn. This playground includes a children's playground, sand piles, swings, slides, seesaws, an athletic field, a swimming pool with a bath house, a running track, game fields, and a gymnasium for men and women. It also contains five hundred children's school farm plots and a model farmhouse.

In some of the parks are small lakes where children can paddle and sail their tiny boats in the summer and skate in the winter. In the hilly sections coasting is the favorite sport in the winter.

A hot summer day finds thousands of men, women, and children at the beaches. The ocean is always cool. The fresh cool breeze off the water and the refreshing bath are well worth the long trip to the shore.

In the crowded sections of the city where hundreds of children have no place to play, some of the streets are closed so a real play space may be provided. The Fire Department provides shower

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An ocean beach on Coney Island.

baths. At night on the clean streets block dances are held. Thus the playground is brought to every one's door.

Parks of New York.—Some of the most important parks of the city are Central Park, Bronx Park, Prospect Park, Morningside Park, Mount Morris Park, Brooklyn Botanical Gardens, Bowling Green, Battery Park, City Hall Park, Riverside Drive Park, and Van Cortlandt Park.

Central Park is between Fifth and Eighth avenues and extends from Fifty-ninth to One Hundred and Tenth Street in Manhattan. The principal points of interest in this park are the American Museum of Natural History, Columbus Circle, Croton Reservoir, Egyptian Obelisk, Metropolitan Art Museum, and the Menagerie. There are also many monuments and several places of historic interest.

Bronx Park is in the northeastern part of the Borough of The Bronx. It contains the Zoological Park and the New York Botanical Gardens.

Prospect Park is in Brooklyn and is considered one of the most picturesque parks of the city. Morningside Park extends from

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The seal pool in the zoo, Bronx Park.

One Hundred and Tenth Street to One Hundred and Twenty-third Street between Columbus and Amsterdam avenues. Between One Hundred and Twentieth and One Hundred and Twenty-fourth Streets at Madison Avenue is Mount Morris Park. The Brooklyn Botanical Garden is bounded by Eastern Parkway, Empire Boulevard, Flatbush and Washington avenues. Bowling Green, Battery Park and the City Hall Park are at the southern end of Manhattan. Riverside Drive is a beautiful riverside park along the Hudson between Seventy-second and One Hundred and Twenty-

ninth Streets. Along Broadway at the northern limit of the city is Van Cortlandt Park.

The Care of Play Places.—With all of these parks provided free for the public to use for sight seeing or as playgrounds, it seems that every child and adult would do their part to keep them in good condition. Do they help or destroy? Signs are everywhere: "Do Not Pick the Flowers," "Do Not Break the Shrubbery," "Keep Off the Grass," "Do Not Feed the Animals," "Do Not Lean Against the Cases," "Check Your Umbrellas and Canes," "Do Not Move the Benches," "Throw Waste Papers in the Receptacles Provided," "Do Not Annoy the Animals," "Do Not Touch." All these and many more—why?

Places of Entertainment.—Besides the parks and playgrounds of various kinds, there are more than fourteen hundred theaters in the city. Within a few blocks of every home in the city is some sort of place of entertainment where the evening may be spent. Nearly a half million people could be seated in these theaters at one time.

Many of the largest and finest of the theaters in the city are in the region of Forty-second Street and Broadway, within a few blocks from Times Square.

Father Knickerbocker has indeed taken care of the play periods of his children.

Questions

I. What is the value of play?

II. Why is something that is work for one person play for another?

III. Give three reasons why the number of playgrounds should be increased.

IV. What purposes does a park like Central Park serve?

V. Why are people careless about park property?

VI. What is meant by entertainment?

CHAPTER XI

The Health of the City

Keeping Well.—When we speak of health many of us are liable to think of sickness. The city is interested in caring for those who are ill, but it is more interested in preventing others from becoming ill. Every possible effort is being made to regulate our lives so that we may be healthy and stay so. Life is longer to-day than it was fifty years ago and there is much less illness. Such truths prove the value of our giving health protection our daily attention.

The Cost of Illness.—Illness costs money because of time lost from work. It also causes much suffering. We think little of our health while we are well and too often do foolish things that bring on a siege of sickness. If we become ill, our first thought is what we might have done to avoid our sad condition.

The Health Department.—There are many things that may be done to avoid sickness and disease. One of the great departments of the city government gives all its time to working for better health conditions. If there are cases of illness, efforts are made to give them the best of care.

The Board of Health in New York City is composed of the Commissioner of Health, who is also the president of the board, the Police Commissioner, and a duly qualified physician who is chosen by the Board of Estimate and Apportionment. This board is the head of the Department of Health of the city. It enacts the Sanitary Code, issues emergency health orders, and has very broad powers in all matters affecting public health.

The official in direct charge of the enforcement of the Sanitary Code and other health laws is the Commissioner of Health. He is appointed by the Mayor.

The health work is carried on through nine different bureaus working under the direction of the Board of Health. One bureau looks after cases of preventable diseases such as smallpox, typhus, typhoid fever, diphtheria, tuberculosis, etc. Nurses are employed who visit homes and instruct families to care for the ill. Clinics are kept to vaccinate against small-

pox, typhoid fever, and also to give the Pasteur treatment to prevent hydrophobia. When desired the Schick test is given for diphtheria.

The Worst Disease.—Of all preventable diseases tuberculosis is the most harmful. This disease thrives where there are poor living conditions, where there is dirt and bad air in the homes. That this disease may be prevented is shown by the fact that even though the population of the city has increased greatly, the death rate from tuberculosis is the lowest in its history.

Caring for Children.—The Bureau of Child Hygiene is responsible for the care of the health of infants and children in the great city from birth until graduation from school. This bureau issues employment certificates to children who are of the proper age and physically fit to work. Boys and girls are thus protected by being kept from hard labor until they are old and strong enough to do the work required of them without breaking down their health.

A very important work of this bureau is the care of babies. Every mother of a new-born babe receives from the Department of

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Baby incubator.

Health a copy of the certificate of birth in addition to a letter relating to the care of babies and calling attention to the service offered by the sixty Baby Health Stations which are maintained by the department in the city.

Nurses are assigned to visit homes where there are babies to see that the little ones receive the proper care that will keep them well and healthy.

Does it pay? Yes, the babies are saved; homes are happier; a healthy child is started on his or her way to a better manhood or womanhood. The death rate among infants in New York City is the lowest of any of the ten largest cities in the United States.

Pure Food and Drug Laws.—The

Bureau of Foods and Drugs is charged with the enforcement of the health laws bearing upon the quality of all drugs, foods, and drinks sold in the city. Its officers inspect dairies, creameries, and all plants where milk is handled. All shell fish to be sold in the city are inspected. The premises where various kinds of foods are handled or sold are regularly inspected. This includes all bakeries, confectionaries, fat rendering plants, ice cream factories, restaurants, slaughter houses, warehouses, piers, railroad terminals, milk depots, and all retail food stores of every kind.

Making Better Homes.—The Sanitary Bureau is charged with keeping the city clean. Officers from this bureau enforce the rules for the proper heating, lighting, ventilation, and plumbing of buildings. The water supply of the city is examined regularly by this bureau. All public places where people assemble are inspected. Public bathing places are kept clean by this bureau. The head of this bureau is the Sanitary Inspector.

Education and Health.—The bureau that works most through the public schools is the Bureau of

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Learning housekeeping in school No. 45, The Bronx.

Public Health Education. To this bureau falls the duty of spreading information about the health of the community. It gives exhibits in different places, furnishes lantern slides, photographs, and motion pictures of the health work. In this way the public finds out what has been done and what every man, woman, and child can do to help the good work along. The bureau publishes weekly and monthly papers for physicians and for teachers and school children.

Public Records of the Health Department.—The Bureau of Records keeps records of all deaths, births, and marriages in the city. This department also makes tables of health facts that are very useful

in studying the health questions of the city.

With all of these bureaus operating along with other important departments, New York City certainly does an excellent work for the health of its citizens. No matter how much the city does, however, it must have help from all of us if we reach the goal of "the cleanest city and the healthiest city in the land." Every child must use care in what he eats, what he drinks, and how much or how little he exercises. He should get the proper number of hours of sleep. He can help the city to keep clean by keeping himself clean. Getting dirty is like getting into trouble; after you get into a little of it, it is much easier to get into more.

Questions

I. Why do people live longer than they did formerly?

II. What is a "preventable" disease? Explain how diseases are prevented.

III. What is meant by "good sanitary conditions"?

IV. Name five rules of health that you have learned to follow.

CHAPTER XII

Taking Care of the Sick and Needy

The City and the Unfortunate.—"Do a good deed daily" is a good slogan for all of us as well as for the boy scouts. Father Knickerbocker with his six million children to care for is called upon to do several deeds of mercy and charity every hour.

It is a good thing to try to keep every one well and healthy, but after everything is done the fact still remains that there are many who cannot care for themselves. These are the sick poor, the poor aged, the orphans, and the widowed mothers. Others are temporarily poor, some are insane, still others are feeble-minded. All these classes are unfortunate and need the help of the city. How are they cared for?

The Debtors' Prison.—There was a time in our history when many of the poor spent their days in the debtors' prison. The orphans were "farmed" out to whoever would employ them. Too often the employer cared only for what work he could get out of the unfortunate orphan. Feeble-minded

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Waiting for treatment in one of the city clinics.

people were allowed to do as they wished as long as they could care for themselves. The insane were regarded as hopeless. They were shut up in the worst type of prisonlike asylums and treated more like beasts than like human beings.

City Hospitals.—New York City provides hospitals having over three thousand beds that are set aside for the needy poor; indeed, about three-quarters of those who are treated in the city hospitals pay no fee.

Metropolitan Hospital on Welfare Island is one of the largest general hospitals in the United States, and is maintained especially for the care and treatment of the destitute sick and injured and tuberculosis patients. Contagious diseases are barred from this hospital. There are eight other hospitals in various parts of the city established for the express purpose of caring for the needy poor.

Each general public hospital has its own ambulance service. A city department called the Board of Ambulance Service directs the ambulance service. This board establishes ambulance stations throughout the city and lays out the routes for ambulances. An ambulance may be summoned by any citizen at any time during the day or night by telephoning Police Headquarters. Any telephone may be used for this purpose without cost.

Training Nurses.—Nurses, like teachers, lawyers, doctors, and others who do a special work, must be trained. Where is the training given?

Many of the hospitals, such as the Metropolitan and City Hospitals in Manhattan, Kings County, and Cumberland Street

Hospitals in Brooklyn, maintain training schools for the training of nurses and social workers. The course in nursing lasts two years. Any girl who has had one year of high school training may enter this course.

Relief for the Distressed.—What of social service? A call comes to the hospital, to the school, to any one who is known to be interested in the welfare of the community. An old couple are ill; some one in a poor family is ill. Some one, somewhere, is in need. A nurse is sent to look after the one in distress. Not only does she relieve them for the present but she makes plans for the future. Such relief is charity, but it is more than charity. There is a sympathetic touch that may help the needy one to a better life.

Poverty is not a crime as it was once thought to be. The poorhouse of to-day is an attempt to give the people who may be so unfortunate as to live there a real home. Two institutions of this kind are located in the city, one on Welfare Island and the other in the Borough of Richmond. The home on Staten Island is made up of cottages where old couples may live out their lives happily.

The Care of the Orphan.—The same kindness is to be found in the care of orphans in the city. Many such children are placed in private homes to be cared for. These homes are paid for such care. There are also institutions in the country for orphans. Many churches of the city maintain homes where children are cared for. This gives the city an opportunity to send children to homes of the same religion as that of their parents.

Special Classes in the Schools.—The public schools give a large amount of time to the care of feeble or mentally defective children. For the underweight, anemic child open-window classes are provided. In these classes food is provided, and much of the school work is conducted in the open air in rooms with wide open windows. Rest periods are given two or three times a day.

Every pupil has a health card record, and examinations are made for diseases of the hair, eyes, teeth, skin, heart, and throat.

Children behind in their classes because of poor minds are given special care in special classes. Special institutions are provided for children whose minds are so

defective that they cannot do regular school work. One of these institutions is located on Randall's Island. Here everything is done to enable the patients to become useful to themselves and to the city. Many who at one time were thought hopeless are now taught to read and write and learn some useful trade.

Homes and Asylums for All.—Altogether there were, according to late reports, several hundred asylums and homes for the distressed and needy in New York City. Some of these homes are for the "Insane," "Aged and Indigent Females," "Incurables," "Blind," "Aged and Infirm," "Crippled Children," "Working Girls," "Old Men and Aged Couples," "Aged Women," and "Home for Friendless."

For the mother who has lost her husband and must support children there is a pension provided.

A Generous City.—Last but not least is the fine work done by some of the great daily newspapers in collecting funds to care for "The Hundred Neediest Cases." The New York *Times* has conducted such a campaign for several years. That the citizens of New York are generous and want to help the unfortunate one is shown by the result of this collection which is purely a freewill offering. Study the report below and decide for yourself how much times have changed since the poor man's fate was a prison cell.

1912	$3,630.88
1913	9,646.36
1914	15,032.46
1915	31,819.92
1916	55,792.45
1917	62,103.47
1918	81,097.57
1919	106,967.14
1920	111,126.00
1921	125,011.10
1922	157,421.08
1923	177,683.67
1924	233,333.89

Questions

I. Why is it profitable to the city to keep its citizens well?

II. Were you ever in a hospital as a patient? If so, how did the care given you there differ from the way sick people are cared for at home?

III. What does your school do by way of caring for your health?

IV. Why should the city help the distressed?

V. Why do people like to be called generous?

VI. What are some of the best ways of avoiding disease?

CHAPTER XIII

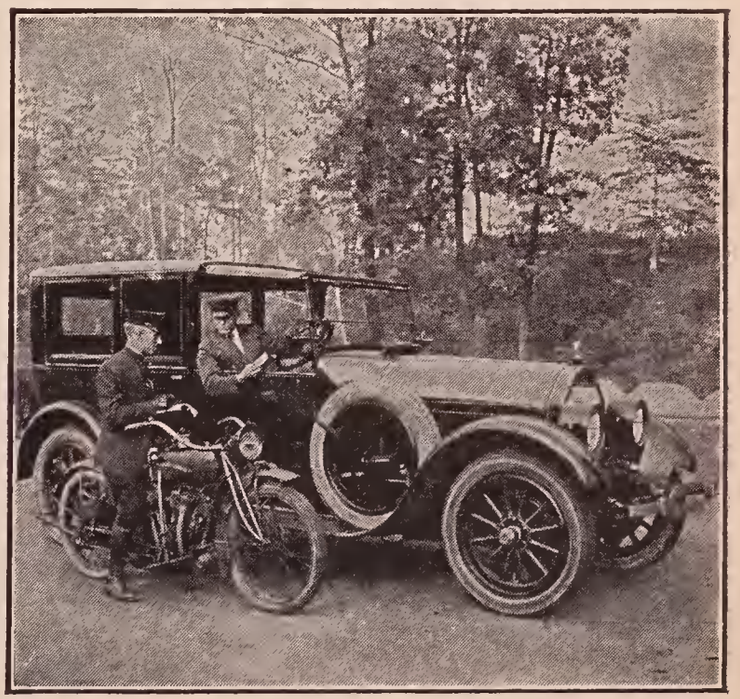
Offenders Against the Law

The Newspaper and Crime.—A common complaint among readers of certain newspapers is that those papers are filled with the stories of crimes committed from day to day. As a help in studying this chapter, take a copy of any of the great dailies printed in New York City and make a record of the stories about crimes. You should also bear the fact in mind that many crimes never find their way to the newspapers.

Law Breakers.—It has always been thus. Some members of society disregard the law; they try to settle disputes by murder or assault; some seek to provide a living and wealth besides by stealing; others commit forgery, arson, and other crimes.

It does not seem that we have progressed as we should in our respect for the law. Within the last few years there has been a wave of crime flowing over the country. The daylight bandit was at one time thought of as a criminal only to be found on the western plains, where he occasionally held up and robbed the lonely traveler or perhaps the overland stage. Our cities are the scenes of robberies of this kind every day at the present time.

Punishment for Crime. — Where there are so many crimes committed, some kind of punishment must be provided for the offender. Prisons for all types of wrongdoers ranging from the truant from school to the most hardened criminal are provided in the metropolitan district and the states surrounding it.



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Enforcing speed laws.

The punishment of different crimes has changed a great deal since early times. There was a time in the life of New York when several different crimes were punishable by death. Now, only murder is punished by executing the offender. A very strong movement is under way to change the law so no crime can be punished by killing the criminal. Many states have already passed such a law, and have substituted life imprisonment for the death penalty.

Punishment in Early Days.—Less than one hundred years ago debtors were imprisoned. It is recorded that in 1788 nearly twelve hundred residents of New York, one in every twenty of its male population, went to jail for debt. It was necessary for the "Society for the Relief of Distressed Debtors" to take the matter in hand before the debtors' prison disappeared.

In early times the whipping post, stocks, and the pillory were common. All these are a memory now.

Imprisonment in the old-style prison meant poor food, a dark, damp cell, little or no bedding, with vermin everywhere. The prisoner's health was undermined, his spirit broken, and because he was thrown with all sorts of men he often came out a hardened criminal.

The Prisons in the Metropolitan District.—Just as we have undergone changes in other things that make life easier to live, we have changed in our attitude toward the offender against the law. If there is any question about the sanity of one who commits a crime, he is examined by physicians who determine whether he is to be held responsible. If he is found insane, he is committed to an asylum for the insane and given proper medical treatment. If he is not insane and is found guilty, he is sent to one of the city or state prisons. There are several prisons in the metropolitan district. In New York City the New York County Penitentiary, Welfare Island, receives prisoners from the five boroughs. One wing is set aside for those sentenced to the Workhouse. The Correction Hospital (formerly the Workhouse) on Welfare Island houses women sentenced to the Penitentiary and the Workhouse. On Riker's Island is the Municipal Farm where drug addicts, both convicted and self-committed, are

sent. In the Reformatory Prison on Hart's Island are the aged and crippled offenders who are unable to work; also boys unfit to be assigned to the New York City Reformatory at New Hampton. Men assigned to work in the industries, and prisoners with bad cases of tuberculosis are consigned to the Reformatory Prison.

Other Prisons.—The New York City Reformatory for Male Misdemeanants is at New Hampton, Orange County, New York. Felons between the ages of sixteen and thirty are sent to this prison. Honor camps are maintained at Greycourt and at the Warwick Dairy Farms. The prisoners at this institution have whatever liberty their case deserves. All the work of ordinary farming is done by some of the men and boys. Every effort is made to give the inmates a chance to make something of themselves. Evening schools are conducted. Educational pictures are shown and some are encouraged to study by taking courses by mail. A library of interesting and instructive books is available for those who wish to read or study. An opportunity is given every inmate to learn a trade through the work assigned to him. Time is allowed each day for recreation through games or play of some kind. There are stores where candies and small luxuries may be purchased. All prisoners are allowed to receive and send mail as they wish with few restrictions. Every prisoner is furnished a Bible and is given an opportunity to worship under the direction of a minister of his own faith every Sunday.

Not all prisons are of this type. It is called a "model prison," and from the above account you can see that it deserves this title.

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The Tombs.

City Prisons.—There are three prisons for the detention of court cases in New York City. The City Prison (known as the Tombs) is in Manhattan. In Brooklyn is a City Prison (referred to at times as the Raymond Street Jail). A third City Prison is located in Queens at Long Island City.

No women are imprisoned at the Tombs. The Jefferson Market Prison, known as the Women's Detention Prison, is used for women as is the Tombs for men.

State Prisons.—Throughout the state of New York are prisons of various kinds. Most important of these are the State Prisons at Auburn, Clinton, and Sing Sing at Ossining. For lighter offenses a number of reformatories are maintained for men and women. The largest of these are at Elmira, Bedford Hills, and Albion.

"Homes" for Offenders.—A great number of "Homes" and "Houses of Refuge" are found in New York City. Some are for wayward girls; some for boys who commit minor offenses. Truant schools are conducted for habitual truants from school.

In New Jersey provisions are made for imprisonment in the State Prison at Trenton and the Essex County Penitentiary besides a number of reformatories, asylums, and correctional institutions.

The names selected for many of the prisons spoken of above give us an idea of the change taking place in the attitude of the public toward prisons and prisoners. For example, how much better it is to speak of a prison as a Correction Hospital rather than a Workhouse. House of Refuge does not carry the same meaning as a "Jail for Young Women." It is also better to give a common school education to young offenders, along with military training that gives them needful physical exercise, than to throw a boy in jail with old offenders and give him nothing to do. The Society for Reformation of Juvenile Delinquents maintains a model reformatory where boys are helped to become useful citizens through education and right habits of living on Randall's Island. It is called the House of Refuge.

The Prison Term.—The old style sentence of a definite number of years in prison varying according to the offense has been replaced by the indeterminate sentence. By

this plan the convicted offender is sent to some place of confinement for a period of one year to eighteen months or perhaps from five to seven years or some other period according to his crime. The prisoner knows that the length of his sentence under such a scheme depends in part upon his conduct. Where this plan is in operation, a Parole Board reviews the cases and determines the time of release of the prisoner. After he is paroled, the offender is obliged to report to some parole office regularly until he is entitled to papers that completely release him.

By thus placing men and women under a good behavior system where it pays to be good and there is little temptation to do wrong, many have been placed on the right track and have become good citizens after serving their term of confinement in prison.

Prison Reform. — The Mutual Welfare League operating in some of our prisons should be given credit for its splendid work in reforming prisoners. This league attempts through an honor system to make men do what they would not do if too closely restrained as in the old prison life. After prisoners are admitted to prison they are given a chance to show whether they are worthy of membership in the league. If they prove by their conduct that they wish to do right and are worthy of trust, they are elected and from that time their conduct is judged by the league. Fellow prisoners act as judges to determine whether each prisoner has become trustworthy and is entitled to release. The testimony of judges and others who have occasion to know men who have belonged to the Mutual Welfare League is that they are cured of their bad habits of thought and action and seldom commit crimes after they gain their freedom.

The Result of Crime.—At the beginning of this chapter it was suggested that you look to the newspapers for the stories of crime. Look again and find what is said of the causes of crime. Less is said of the result of the crime than of it otherwise. The result is most important, however. It costs the state thousands of dollars each year to prosecute criminals. Millions of dollars have been spent in the metropolitan district and the states of New York and New Jersey in building and maintaining jails and reformatories. Some

one suffers for every crime committed, and the offender pays most dearly for his offense.

With a police force in every city to protect the public safety, it is the fate of most criminals to be caught and imprisoned.

Crime will not cease as long as the thoughtless offender yields to the temptation of "getting even" or obtaining something for nothing without thought of the punishment that is almost sure to overtake him.

Questions

I. Do you believe in capital punishment? Give five reasons for and five against it.

II. Why should criminals be punished?

III. Why shouldn't the debtor be imprisoned?

IV. What is a "pillory"?

V. What is a "model" prison?

VI. What is the difference between reforming and punishing a prisoner? Which is better?

VII. If you knew that some friend of yours was thinking of committing a crime, state three arguments that you would use to prevent him.

CHAPTER XIV

Water and Food Supply

Uses of Water in the City.—Water is so plentiful and so easily obtained that the important part which it plays in the life of the city is not appreciated until we think about some of its uses. Every household needs it for drinking, cooking, cleaning, and bathing. If there is a lawn or garden, it is often used on them. The Street Department uses it to wash the streets and carry away the waste in the sewers. The Fire Department uses a great quantity of it. Manufacturing plants that have steam power use it in their engines. The Park Department uses it to water the lawns. A great deal of it is used in the Zoological Park for the animals. It is used in the summer playgrounds for bathing. You may think of other uses.

Water Used in New York.—With so many needs, the supply must be great, and so it is. New York City uses nearly eight hundred million gallons daily. Other cities use proportionate amounts. Eight hundred million gallons of water

would cover Central Park about three feet deep.

We must add, then, to the necessities of the location favorable for a great city besides those spoken of on page 9, another advantage, and that is nearness to a good water supply.

A Good Source of Water Supply.—What is a good source of water supply? In early days it was a good place to dig a well. The home builder of early days always looked for a way to get water for his household before he began to build. In the country when a home is built, a well is drilled or dug and a pump installed before the family thinks of moving in. Some homes in New York City and many in the district outside of the city to-day are supplied with water for the household in this simple manner. There was a time in the early history of the city when all homes had their own well. In those days "The Old Oaken Bucket" meant much more to the people than it does now. The water was drawn from the wells by means of a well sweep, a chain pump, or a suction pump. A cup hung by the well-side, and a trough was near by for the animals. A man whose well went dry in a dry season was always welcomed at his neighbor's well.

Early City Systems.—As New York City grew, the city provided wells in some of the important streets. It was not until 1800 that a company took hold of the water supply question and attempted to supply water to the residents. The first company to do this was the Manhattan Company which sunk a well at Reade and Center Streets. The water was pumped into a reservoir on Chambers Street and from there it was carried in wooden mains to a portion of the city.

The city grew so fast and the water supply was so poor that the question of health became a serious one. They did not know so much then as we do now about the effect upon the human body of drinking impure water; neither did they know so well how to care for diseases that often come from water that has come from an unsanitary source. Typhoid fever was not an uncommon disease and it was often fatal. There were even epidemics of cholera, which, as a rule, is caused by drinking impure water or eating impure food. It was during such an epidemic that the plan of getting better

water was adopted by the city. This plan was that of building an aqueduct from the Croton River in Westchester and Putnam counties to the city. This river was thirty-eight miles from the then populous part of the city, so the plan of bringing water from there was thought impossible by many. Like other great plans that have worked out successfully, it was regarded at first as a dream. Dreams of that kind have resulted in many of the wonderful structures and businesses which make New York one of the wonder cities throughout the ages.

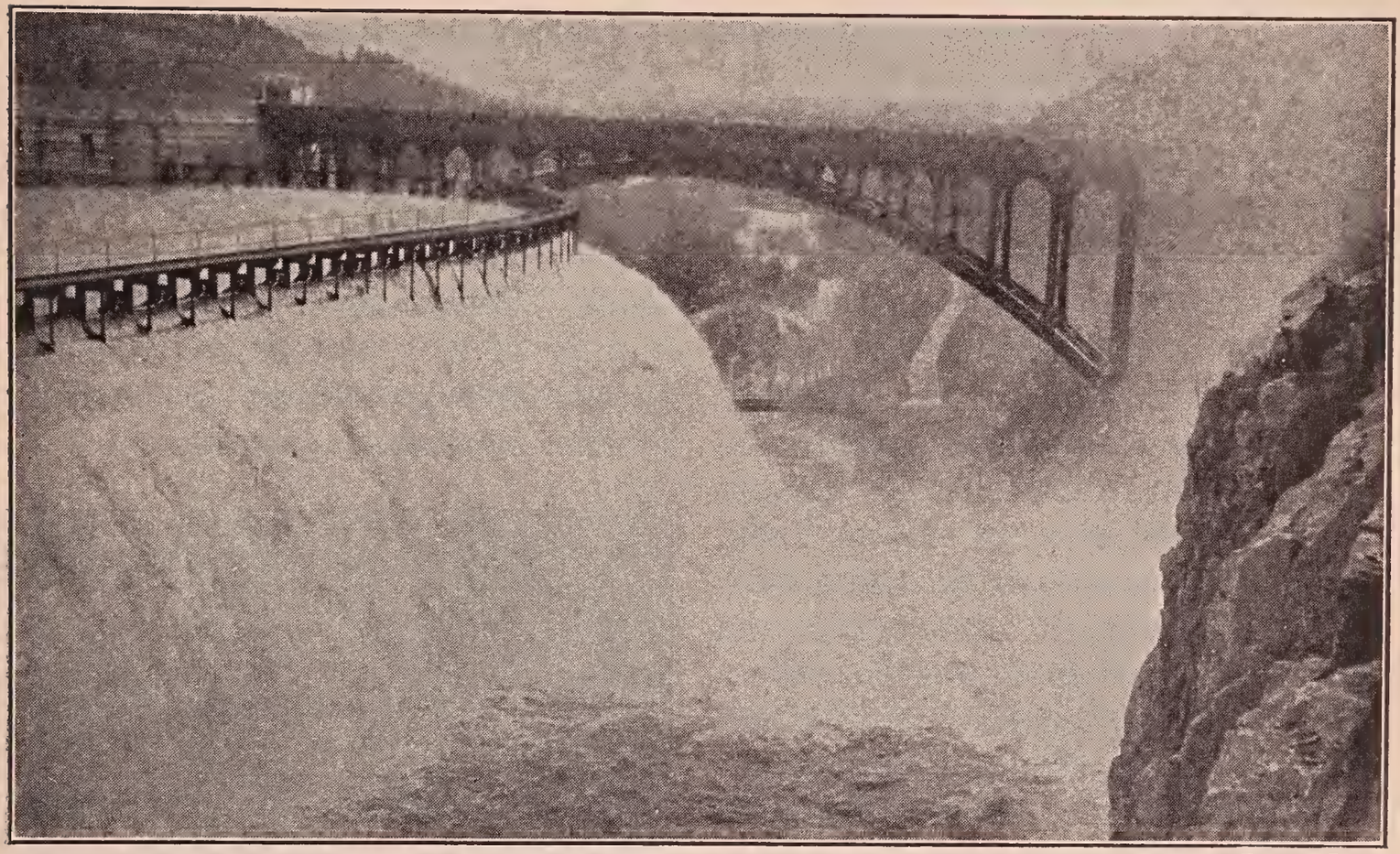
The "Old" Croton System.—Work commenced on the aqueduct in 1837, and it was opened for use in 1842. The water supplied by what we now call "The Old Croton Aqueduct" was stored in a reservoir at Forty-second Street and Fifth Avenue. This reservoir was on what is now the site of the New York Public Library. The reservoir was removed from there in 1890. In the meantime another reservoir had been built in what is now Central Park between Seventy-ninth and Eighty-sixth streets. This reservoir is still in use, and much of the water brought to the city through the Old Aqueduct is distributed to the water mains from that center.

The building of the first large aqueduct was difficult in those days because there were not the conveniences that are to be seen anywhere now where excavating or building is going on. The digging, the mixing of the cement, and the handling of the heavy pipes called for a great deal of skilled and unskilled labor.

Earth embankments were built over valleys for the aqueduct; hills were tunneled; High Bridge over the Harlem River was crossed by means of iron pipes, one of them plenty large enough for a tall man to walk through.

Still More Water Needed.—As the city increased in size more and more water was needed. This need was met by building "The New Croton Aqueduct," which was put into operation in 1891. This aqueduct carried the water to the Jerome Park Reservoir and from there under the Hudson River to the reservoir in Central Park.

In addition to the water from the Croton Aqueduct the city has been supplied with water from The Bronx and Bryam watershed. These rivers are located in West-



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Ashokan Dam, an important part of the Catskill water system.

chester and Putnam counties. These waters were formerly delivered into the former Kensico Lake and from there were taken to the Williamsbridge Reservoir in The Bronx. This lake is now a part of the Kensico Reservoir, and from that point the waters from the Bronx and Bryam watersheds become a part of the Catskill supply system.

The Catskill Water Supply.—The new Catskill Mountain supply system depends upon two drainage areas for its water supply. These areas or watersheds lie in the central part of the Catskill Mountains between eighty-five and one hundred twenty-five miles from New York City. The Schoharie watershed has an area of 314 square miles. Esopus is 357 square miles in extent.

The Schoharie section is connected with the Esopus area by means of the Shandaken tunnel under the mountain of that name. The tunnel is eighteen miles long.

The drainage of the Schoharie system is naturally toward the north, so it is necessary to build a dam at Gilboa to turn the waters back so they will flow through the tunnel into the Esopus watershed and from there to the Ashokan Reservoir, about fourteen miles west of Kingston on the Hudson. An immense aqueduct carries the water from the Ashokan Reservoir to the city of New York. From this reservoir to the Silver Lake Terminal Reservoir on Staten Island is almost a three-days' journey for the water at the rate it flows through the aqueduct.

The water is carried under the Hudson River by means of a tunnel in solid granite rock, at a depth of 1,114 feet. This tunnel connects the bottom of shafts on each side of the river—at Storm King Mountain on the west and at Breakneck Mountain on the east.

The Ashokan Reservoir holds enough water to cover Manhattan Island to a depth of thirty feet. The surface of the reservoir when it is full is 590 feet above the level of the city. This is a great advantage because it makes it possible to get the water to the city without pumping.

The Kensico Reservoir, which is about thirty miles from New York, contains enough water to supply the city several months. Hill View Reservoir is located in the city of Yonkers just north of New York. These reservoirs insure a supply of city waters for the city if something should go wrong at the source of supply.

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Purifying city water at Ashokan Dam.

A visit to these reservoirs would give you an idea of some of the methods used to make the city water supply fresh, sparkling, palatable water that may be drawn from any faucet in your home.

Purifying the Water.—Aërators, or large fountain basins, are constructed in the reservoirs. From these basins hundreds of nozzles spurt water into the air where it

is mixed with pure air, and gases and other matters that might cause a bad odor or taste in the water are removed. After the water leaves the Kensico Reservoir certain chemicals are put into it to destroy all germs that might cause disease.

Carrying the Water to the Homes.—Underground tunnels carry water from Hill View Reservoir to the boroughs of New York City. These tunnels vary from three feet to fifteen feet in diameter and are from 200 to 750 feet below the surface of the streets.

At the present time about half of the water used in Manhattan and The Bronx comes from the Croton supply; the balance comes from the Catskill system.

The Brooklyn System.—For a long time the old city of Brooklyn did not have a public system of water supply. Up to 1859, all the waters of that city came from wells and cisterns. The first supply from outside the city came from the Hempstead Valley, when water pumped from several wells and ponds was conveyed to the city through a brick conduit. This system was later extended to Massapequa, Long Island, and the great Milburn and Ridgewood pumping stations were constructed. These stations pump water from over nine hundred wells that have been driven in that section into the path of underground water that seeps through the earth on its way to the ocean from the high points of Long Island.

At the present time Brooklyn is supplied from the Esopus watershed and by the old Brooklyn system along with one private water company.

The Water Supply in Queens.—Queens Borough is supplied with water only in part by the city. Several private companies operate in different parts of the borough. In Richmond most of the water comes from the Esopus watershed. The balance is supplied from wells.

The cost of this wonderful water supply system runs into millions of dollars. The cost of the Catskill system alone would be sufficient to place a one-million-dollar building in every block of Broadway from the Battery northward for a distance of nearly eight miles.

It takes a small army of employees to properly care for the work in connection with sources of supply, distributing, and the

quality of the water in the city. All this is looked after by the Department of Water Supply, Gas and Electricity, under the control of a commissioner appointed by the Mayor.

The Bureau of Water Supply is responsible for the water supply of the city.

Water Supplied to All.—The citizen and his family, poor and rich alike, are supplied with pure, wholesome water. What does he do in exchange for this service? First of all, he pays a fixed charge for the amount of water he uses. He is not through, however, when he pays his water bill. It is estimated that about one-third of the Catskill water supply is wasted every year through faulty fountains, leaky pipes, and carelessness in turning off faucets. This waste amounts to one hundred million gallons each day, which costs three-quarters of a million dollars to supply in a year. Some one must pay the bill for this carelessness. Who pays it? We can lower the bill by having leaky fixtures repaired. If we notice a fire hydrant, or a water main cover leaking, we should report it to the office of the Water Supply Bureau.

Food a Necessity.—There are in our lives several necessities. We need water, food, clothing, shelter, and a source of income to provide these needs. Let us now consider the next necessity after water—food.

Distributing Food.—A boy in the country, while entertaining a friend, said, "Eat all you want; it doesn't cost us anything." He was only partly right. His food came directly from his labor. There was no question of packing, shipping, storing, selling to the merchant, and the merchant selling to the housewife.

The city dweller's food travels a long road and through many hands before it reaches his table. Getting the produce from the producer to the consumer is called distribution. Distribution with the farmer is simple. He gathers his apples from the tree, digs his potatoes from the ground, picks his green corn from the stalk, milks his own cows, and in many cases slaughters his own hogs, cattle, and sheep. All but a few of his table wants, such as sugar, spices, coffee, and a few others, are produced on his own land. What of the city dweller? His milk is waiting in a bottle outside his door when he wishes it for breakfast.

His vegetables must be purchased at the grocery. The bakery supplies his bread. In fact, all his food must come from a distance. When as many people as are in New York must be supplied from sources far and near, the food problem becomes a great question. In addition to the six million permanent residents of the city, there are about one million commuters and three hundred and fifty thousand visitors to the city who must be fed every day.

This great family's table is supplied directly by over 15,000 restaurants, 5,000 bakeries, 7,000 fruit and vegetable stores, 1,200 retail butchers, 19,000 grocery stores, 4,500 delicatessen stores, 7,500 pushcarts, and a host of other dealers such as hucksters, venders, and small-stand merchants.

From ten to fifteen thousand carloads of foodstuffs enter the city every week. This food comes from all over the globe. There are people from all over the world in the city and they get the food that they care for most.

It is difficult to tell the whole story of this immense food supply because the figures are so large that it is hardly possible even to imagine the quantities represented by them. For example, the milk used daily if placed in quart bottles side by side would extend one hundred twenty miles. An automobile going twenty miles per hour would require six hours to pass them. This milk comes from the states of New York, New Jersey, Connecticut, Vermont, Massachusetts, Pennsylvania, and New Hampshire, and from other points a considerable distance from the city. Canada supplies the city with a large quantity of milk. Many consumers buy it in large cans.

Over six thousand delivery wagons are used to deliver this milk to the homes. Several thousand dealers also sell milk in their stores.

The bread consumed every day in New York would cover Union Square five loaves deep. There would be one and a quarter million loaves of it in the pile.

Eggs from many of the states in the Union and from Canada, Denmark, China, Argentine, Australia, and other parts of the world come to New York at the rate of nine millions a day.

Food Used in New York.—The table (p. 96) will tell the story in a brief manner of the quantity of

some of the foods that enter the city of New York each month.

We have all seen long freight trains, but none of us can well imagine a train eighty-five miles long which would be required if one train could be used to bring the food to the city each week.

QUANTITIES OF FOOD ARRIVING IN NEW YORK IN DECEMBER, 1923

Fruits,. 4112 cars.....	123,360,000	pounds
Vegetables, 4245 cars.	127,350,000	pounds
Butter	15,388,730	pounds
Cheese	2,731,390	pounds
Eggs	271,944	cases
Dressed Poultry.....	27,288,539	pounds
Live Poultry	20,995,000	pounds
Fresh Beef	124,832,445	pounds
Canned Meats and Provisions	131,566,368	pounds
Milk	2,000,000	quarts
Bread	1,250,000	loaves
Eggs	500,000	dozen
Butter	313,000	pounds
White Potatoes.....	1,688,970	pounds
Sweet Potatoes.....	204,073	pounds
Melons	135,183	
Apples	882,493	pounds
Grapes	395,411	pounds
Bananas	40,000	bunches
Onions	219,945	pounds
Peaches	188,712	pounds
Peas	18,140	pounds
Tomatoes	152,000	pounds
Cabbages	180,800	pounds
Cheese	165,000	pounds
Meat	4,000,000	pounds
Poultry	800,000	pounds

Some of the largest food items are not included in this table. These are flour and grain products, fish, sugar, and many other important foods which are consumed in large quantities.

The Daily Food Bill.—Most of us buy our food each day. Perhaps we do not think of all the other people who are marketing at the same time. Thousands of small sales make large totals. Study the daily food bill above that Father Knickerbocker is responsible for:

The production of so much food is a problem by itself, but that side of the question is not of chief concern to the city dweller. He is concerned in the manner in which it is delivered to his table.

Waste of Food.—It is estimated that half of the food and vegetables sent to the metropolitan markets spoils before it can be marketed in the cities. About ten million pounds of food is condemned by the Department of Health in New York each year. This suggests many questions.

Certain foods from distant places must be shipped in refrigerator cars in the summer and heat must be provided in the winter. If

the temperature is not just right, the fruit, vegetables, eggs, and other perishable foods may not arrive in good condition. If they arrive all right and are not delivered quickly to the retailers, decay may set in, and then they are condemned by the Health Department.

The City Market.—There must be wholesale distributing centers in the city where the retail dealers may buy. These markets are many in number and range from bad to good in construction and management.

Jobbers receive foodstuffs at the wholesale markets by truck from trains and piers and resell to the retailers. It would be a good plan if housewives could conveniently visit the large markets and buy directly from the jobbers. Many profits made by extra dealers would be cut from the cost of foods if this plan could be followed. The city is so large and markets are so few that this is impossible, however.

The Department of Public Markets with a commissioner appointed by the Mayor is charged with the duty of arranging better market conditions in New York.

The Bureau of Distribution seeks to find better ways of distributing food so there will not be so much waste.

The Bureau of Production tries to get a surplus of food in New York.

The Bureau of Physical Plants sends out inspectors to see that the people handling and making foodstuffs do so properly.

Housewives are taught to do marketing in a better way by the Bureau of Information. A plan is under way to establish city-owned wholesale markets where food may be delivered and stored properly so it will not spoil by decay, freezing, or exposure to the weather as it does in so many of the poorly constructed wholesale markets in the city to-day. (See Report of Commissioner of Public Markets in New York City, 1924.)

Purity of Foods.—Another question that concerns all of us is the purity of our food. Consider the most important of all foods, milk. We receive our milk in a bottle. One bottle looks much like another, but one may be pure and the other so impure that it would cause disease and death if used as food. Some of the worst diseases are caused by germs that breed in im-

pure milk; typhoid fever is one of the worst of these.

All milk delivered in the metropolitan district is inspected and tested for dangerous disease germs. It is pasteurized, heated to a high temperature to kill all germs, and then it is bottled in the most sanitary manner. All who handle milk from the time it comes from the cow to the time it is crated for shipment must be clean. All must be healthy men and women so they will not spread disease by coming in contact with the milk.

Milk is graded into A, B, and C grades. A Grade raw milk is pure, but it must be used soon after delivery or it will sour.

Care should be taken in buying any milk from large cans. Unless it is protected from all dirt and dust it is likely to be very unhealthful.

A great quantity of baked goods are used in city homes. Most of the baking is done in large plants. Inspectors from the Board of Health regularly inspect all bakeries to see that clean utensils are used. They see that the baked goods are handled by clean, healthy persons. The baker is compelled to use clean wrappers for his product. He is obliged to use good flour and other ingredients in his bread and pastries.

All slaughter houses are under control of the Bureau of Animal Industry of the United States. "Uncle Sam" helps the city to get clean, wholesome meats. Look for the blue stamp of the inspectors the next time you visit a butcher shop. It is a serious crime for any dealer to attempt to preserve meat in a manner contrary to law. An up-to-date butcher shop is the best example of good housekeeping found in the city. Refrigerators are clean and free from moisture and bad odors. All woodwork is painted or whitewashed. Chopping blocks are scraped daily. Knives and choppers are washed often. The floor is covered with fresh sawdust daily. All this is a part of the plan to keep us well by giving us good food.

The fruit and vegetable inspectors must be watchful for moldy fruits and decaying vegetables. It does not take many hours for certain fruits and green stuff to spoil after they are exposed to the air. Oftentimes carloads of such foods are ordered destroyed before they ever get to the markets. A part of such waste is due to the

poor facilities that we still have for moving cars after they arrive in New Jersey. Plans for the future call for a quicker movement of freight that is liable to spoil if delayed long.

The merchant should keep all fruit covered so flies may not get to it.

Cold Storage of Foods.—The plan of keeping certain foods in cold storage has done much to solve the food question for cities. Meats,

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Food in cold storage.

eggs, butter, cheese, some fruits, and many vegetables can be put into cold storage plants at the season when they are plentiful and marketed at another season of the year. Many things may be enjoyed out of their regular season by this plan at a price that would otherwise be impossible for all except the wealthy.

Canned Food.—The shelves full of canned fruits, vegetables, fish, and meats to be found in every grocery store represent another plan of preserving food that is necessary where large numbers are to be fed with food produced at a distance. The tin can and glass jar tightly sealed make many kinds of foods easily obtainable at all seasons of the year.

Pure Food and Drug Law.—The demand for various kinds of preserved meats, fruits, vegetables, and other foods has tempted many dishonest men to put a poor quality of food on the market. Spoiled foods may be made to appear good by treating with certain chemicals. This was done so much that in 1906 a "pure food and drug" law was passed. By this law it became necessary to label all foods and drugs so that the buyer may know exactly what he is buying. This law has stopped many frauds and has done much to insure better health. There is no surer way of getting disease than by eating impure food of any kind.

Honest Measure.—All this has been done by way of getting a supply of food available for all of us. Another important matter must be attended to, however, if our buying is to be satisfactory. We must get what we pay for. To insure this, there is in New York and all of the other large cities in the metropolitan district a Bureau of Weights and Measures. Were it not for such a bureau, butter would be sold in packages that weigh two or three ounces without deducting the weight of the package. Berries would be sold in baskets with raised bottoms. Other fruits would be measured in too small measures. "Short-weight" scales would be used. False scales and dishonest measures found in New York are taken to sea and thrown overboard. They are destroyed in some manner in all cities. Everybody should be on the lookout for dishonest dealings and report such dealers to the proper bureau.

It is estimated that forty-three cents out of every dollar earned in the average family is spent for food. The total food bill in New York City is about four million dollars a day. It should be everybody's business to help the city in every way possible to provide enough pure food at reasonable prices. We should surely be interested in a matter where our health and most of our money is concerned.

Questions

I. Without a good water supply there could be no city. Explain.

II. What are the dangers of impure water?

III. Give three ways in which you can help to stop the waste of city water. Who pays for wasted water?

IV. Would you rather live on a farm or in the city? Why?

V. The farmer oftentimes gets a few cents for a basket of tomatoes that sell for fifteen or twenty cents a pound in the City Market. What are some of the reasons for high prices asked for foods?

VI. What is the value of cold storage?

VII. Why should such food as vegetables be sold by the pound instead of by measure?

CHAPTER XV

Lighting the City

The White Way.—New York of to-day becomes a "City of Light" at night. Its great "White Way" shines from the glow of thousands of brilliant lights. With its many street lights and illuminated signs of all descriptions it presents a sight unlike any other in the world.

When nightfall comes one can stand on Broadway and get an impression never to be forgotten of hundreds of kinds of merchandise that he is urged to buy, of plays that are attractive, and of business firms that invite his patronage.

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Broadway at night. The "White Way."

Lighting in Early Times.—Suppose we journey back to the days of our grandfathers. Indeed, it was in the days of some of our fathers when New York and other cities ushered in the close of day by lighting the tallow candle. Many a newspaper of those days was spattered with tallow or wax as the reader held the candle in one hand while he turned the pages of his paper with the other.

The evening meal was often served with a fluttering candle in the middle of the table. Most of the room was in darkness. If there was need of a light in another room, oftentimes the family sat in darkness until the good housewife returned with the candle.

Street Lighting in 1689.—It was difficult enough to light the home in early days. To light the streets

was a serious problem indeed. In 1689 a law was passed in New York requiring the citizen of every seventh house to hang out a light on the end of a pole. Such lights, no more than a tiny flame, served to direct the traveler on his way, but they really did not light the streets so any one could feel safe from the lurking highwayman who might lie waiting in the dark shadows.

Better Lights Needed.—As New York increased in size, it was more and more necessary to make the night time safe for its citizens. Street lamps were installed and improvements were made in means of lighting along with other innovations in city life. The use of electricity for lighting purposes in the streets and home marks an important stage in the history of the comfort and safety of mankind. The kerosene oil lamp, which succeeded the tallow candle and the whale oil lamps, was greeted by the householder as a wonder of the age. The whole family could actually sit around the evening table and read, sew, or play games—all by the use of the lamp that burned oil by means of a cotton wick, a simple burner, and a glass chimney which served to keep the flame from being blown out by currents of air. This type of lamp was used in New York and is still used in many small towns to light the streets. The arc light on the street and the incandescent bulb in the home quickly replaced kerosene lamps wherever an electric current was available.

It is so easy to press a button and flood a room with light that we are likely to take home lighting for granted. A small monthly bill is the only reminder that we have of a lighting problem in the home. If we do not study our tax bill, the street lighting becomes something like the expected sunrise of the morrow.

Let us study some of the problems that need to be solved before our homes and our city streets can be lighted so well that we get about at night as easily as we do by day.

In New York City the Bureau of Gas and Electricity has general supervision of the lighting of the streets, homes, public buildings, and business places.

Street and Park Lighting.—The street and park lighting of our cities is an important matter for all of us. A large share of crimes is committed at night.

Were it not for the brightly lighted streets, it would not be safe in some parts of the city at night.

Every town of any size has its "white way." The use of electricity makes it easy to turn night into day. On the principal streets the owners of business places join with the city in furnishing an extra quantity of light. This is good for the people who use the streets, and it is also a good advertisement for the business men who own businesses along the thoroughfare.

The lights used to-day to light the streets are various types of electric lamps. In some of the quiet streets gas is still used. Many gas lamps are found in parks, but they are being rapidly replaced with electric lamps.

The Bureau of Gas and Electricity looks after removal of aërial wires used for lighting and the replacing of them with wires under the streets. It also installs fire alarm signal lamps operated from a central station.

Lights and Traffic.—Every driver of an automobile as well as every pedestrian has had occasion to be thankful for the police traffic signal lights. They are used on a small scale in many sections of New York and elsewhere. The most complete system of this kind is to be found on Fifth Avenue. A beautifully designed series of towers are set in the middle of that avenue from Thirty-fourth to Fifty-seventh streets. Through the use of different colored lamps in these towers the traffic is easily regulated. It is easier to see a tower light a block or more on a densely crowded street than it is to see a policeman on the street or to hear his whistle.

All driveways and bridges are lighted according to plans made by the bureau mentioned above. This bureau also looks after the inspection of electric wiring for light, heat, or power in all buildings both public and private. It tests all gas to see whether it is of the proper pressure, purity, and lighting qualities.

All who wish to become electricians or motion-picture operators must secure their licenses through this bureau.

Lighting and heating is a problem that is very near to our home interests. The heating of homes is largely an affair for each householder to attend to. As to lights, we have gone far from the candle

or lamp of other days. Enough has been told to show the great city problems that must be dealt with before we can have a well-lighted home or be sure of our safety on the streets after nightfall.

Home Comforts and Lights.—How much more is added to the comfort of the home by good heat and light! A cheerful fire and a good light do much to make us forget the daily toil. We can read, study, or entertain friends far more easily than our fathers could. If we visit the theater, the lighting of the stage adds a great deal to the play or opera. Our public buildings with immense rooms could not be lighted with oil lamps and only poorly lighted with gas, but they may be brilliantly lighted through the use of electricity.

A great deal remains to be done. Many fires are caused by defective wires and wiring. Lives are lost by exposed "live wires" on the streets. Homes are not lighted as well as they might be, nor are the lamps and fixtures always selected and placed with the idea that beauty counts in home lighting. There is at present a movement throughout the land toward the securing of "Better Lighted Homes." How can we help in this movement?

The Old Lamp and the New.—The old type of gas lamp with its many arched and curved parts looks clumsy to us to-day. The first electric arc lamps were not well placed nor designed to please the eye. Beautiful as well as serviceable lamps are being placed on the streets and avenues of New York and other cities to-day. Many of the smaller cities, particularly along the New Jersey shore, are beautifully lighted with lamps that are really artistic in design.

Questions

I. What were the disadvantages of early means of lighting?

II. How do good lights help a home? How is your home lighted?

III. Imagine all lights removed from city streets. What would be the result?

IV. Describe or draw some of the street lights that you think are well designed.

CHAPTER XVI

Communication

The Messenger Long Ago and Now.—There was a time in the history of the City of New York when if a man at the Battery had business to transact with a man where the City Hall now stands, he was obliged to spend an hour or so journeying to that man's place of business. A few errands of this kind would take up all the time of the working day. The city was small in those days and men could get from place to place. What of the present? Suppose a business man at Coney Island was obliged to see a man in the northern end of The Bronx. With all the conveniences that the city offers to-day, it would take him several hours to make the trip and return home.

The City at Every Desk.—We do not walk, take a carriage, nor even the trolley or subway if we wish to talk business with a man in another part of the city to-day. We telephone. The whole city is "at a man's desk." A great city with all its busy life would not be possible without the telephone. The business man does much of his business over it. The housekeeper does her buying; the police keep in touch with each other; doctors are within reach of the home; the whole city is linked together through the telephone. The long-distance telephone makes it easy for the man in New York to talk to his business friend in Chicago or other distant cities.

Brown Bros.

The New York City Post Office.

If the business is such that it cannot be done over the telephone, the United States postal service is

ready to carry letters everywhere. Small packages of merchandise are carried by parcel post at a small cost. If it is to be insured, a very small fee will pay for the

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Loading the air mail car.

insurance of the parcel. A ten-cent special delivery stamp attached to a letter insures its delivery as soon as it reaches the post office to which it is sent. The air-mail service delivers the New York letter in San Francisco in thirty-six hours.

A visit to the Stock Exchange where thousands of business transactions are made every day will show you one of the many uses that the telegraph is put to in business. Hundreds of instruments fill the air with a constant clicking. The whole country knows within a few hours every trade that has been made in the Stock Exchange during the day. As the telephone links up the different parts of the city, so the telegraph unites all the people of the country.

The ocean cable shortens the time of sending messages across the ocean to a few seconds. The whole world is as easy to reach as our next-door neighbor.

The telephone and telegraph have both been improved through the inventions of Guglielmo Marconi. His device, whereby we are able to send messages without wires or cables, makes it possible to reach the distressed ship at sea and to send messages to any place in the world.

Where messages are to be delivered quickly or the distance is not great, messengers are employed. There are thousands of messenger boys employed in the city, and they render a very important service in the city's business.

Broadcasting by Radio.—In the last campaign for President of the United States, the candidates were able to speak to millions of people at one time by use of the radio.

The arctic explorer is able to

Brown Bros.

The municipal broadcasting station, WNYC.

hear the voices from home no matter where he may be.

The Newspaper.—As important in many ways and more important in some ways than all these means of communication is the newspaper. News stands are everywhere, and every one seems to be reading a newspaper when he has a leisure moment. The life of the city, state, nation, and world is recorded in the newspaper.

The last Federal Census records 3,316 printing and publishing establishments in New York City. Many of these publications are journals devoted to special trades. Some are story magazines. In fact there is a magazine or newspaper in whatever field a man may be interested. The leading daily newspapers to be found on every news stand are: *Evening Journal, Evening Post,* New York *Herald and Tribune, Journal of Commerce,* New York *American,* New York *Times,* New York *World* (morning and evening) and New York *Sun.*

The best way to find out the value of these means of helping the citizens of New York to know his neighbors is to imagine a day spent in the city without any of the conveniences that we have told you about in this chapter.

Questions

I. Explain how the whole city is "at a man's desk."

II. Of what value is the radio?

III. Why is the newspaper a necessity?

IV. Why should you read the newspaper?

CHAPTER XVII

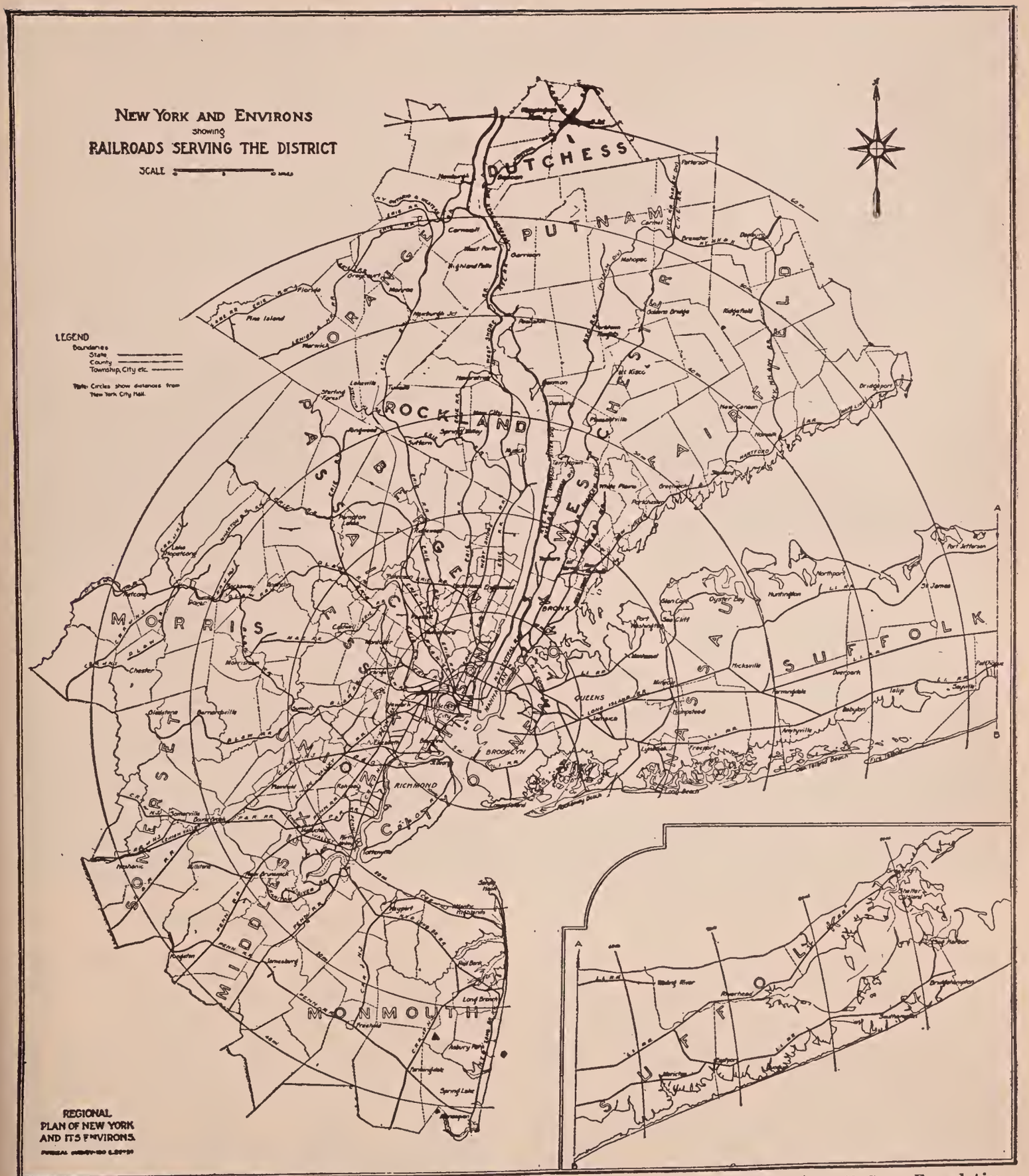
Transportation

A View of the City's Business.—Take a trip to the top of the tallest building in New York on some clear day and look around over the city and harbor of one of the busiest ports in the world. The Hudson and East rivers are covered with crafts of all kinds. Some great liners are discharging passengers; others are being loaded with freight for the world's trade. There is wheat from the western prairies, oil from Texas, machinery for the farms of the Old World, typewriters for Africa, phonographs for India. Hundreds of articles from the manufacturing plants all over the United States are brought to New York Harbor for shipment. The vessels that carry these products away brought shiploads of produce from their home ports.

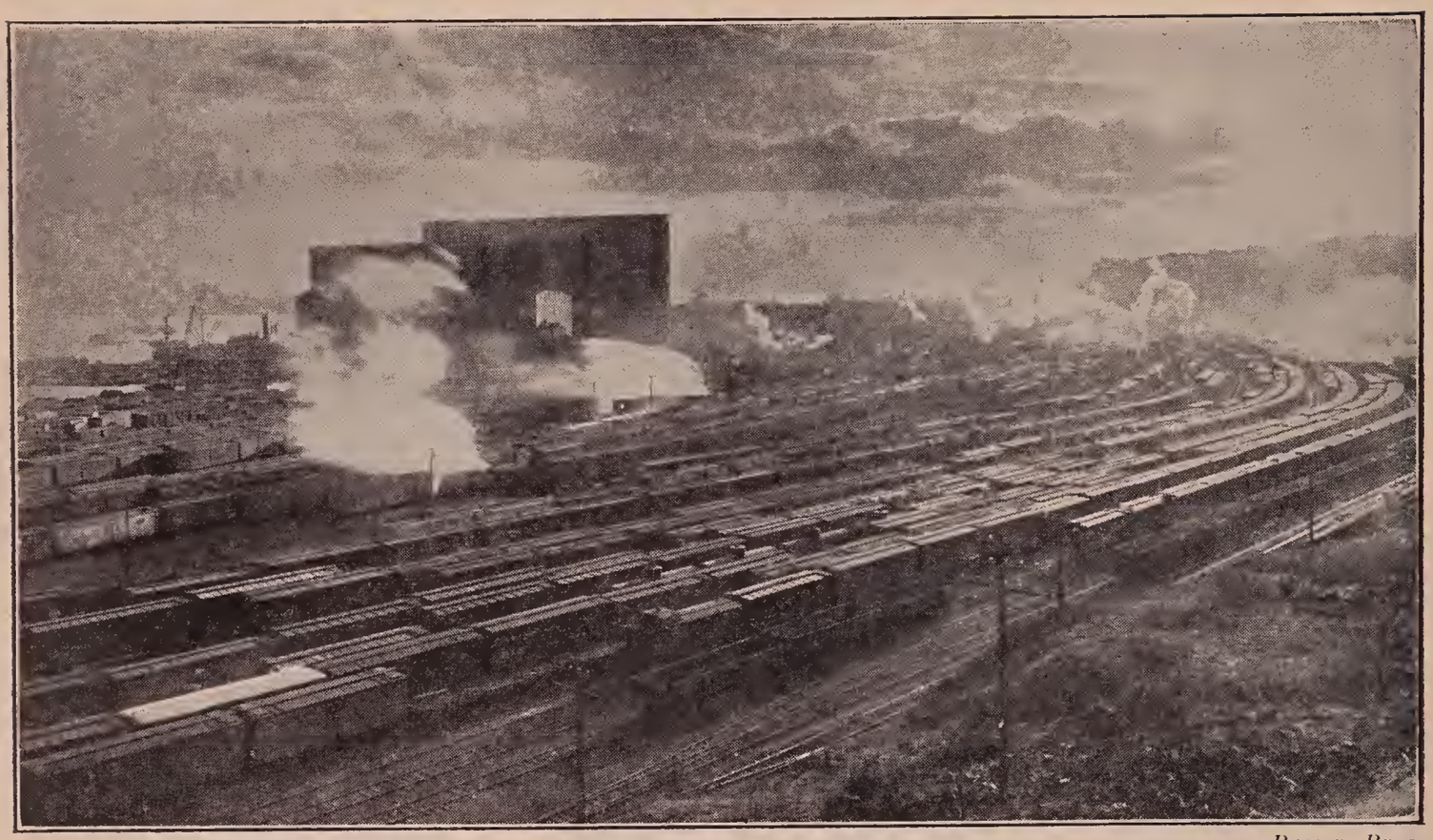
More than two hundred ocean-steamship companies operate to foreign ports from New York. These lines connect the city with Europe, Central America, East and West coast of Africa, Australia, New Zealand; in fact, every nook and corner of the world sends something to New York.

Besides the foreign trade, there are about sixty regular steamship lines that carry on coastwise and river trade with different parts of the United States. Barge lines carry freight to Philadelphia and Baltimore. Eight boat lines operate on the Hudson River. Two regular canal lines also operate by way of Albany and the New York State Barge Canal line to Buffalo and points on the Great Lakes in the Middle West.

Extent of the Waterfront.—It takes a great many piers and docks to care for so much trade, but the port of New York has 771 miles of waterfront. Of this extent 341 miles is improved for shipping. So great is the extent of the harbor that it takes two full business days, steaming rapidly, merely to view the entire shore line. To cover in a ten-knot vessel all the ins and outs along the ocean, sound, bays, and rivers of the waterfront would require eight days.



Courtesy Russell Sage Foundation.



Brown Bros.

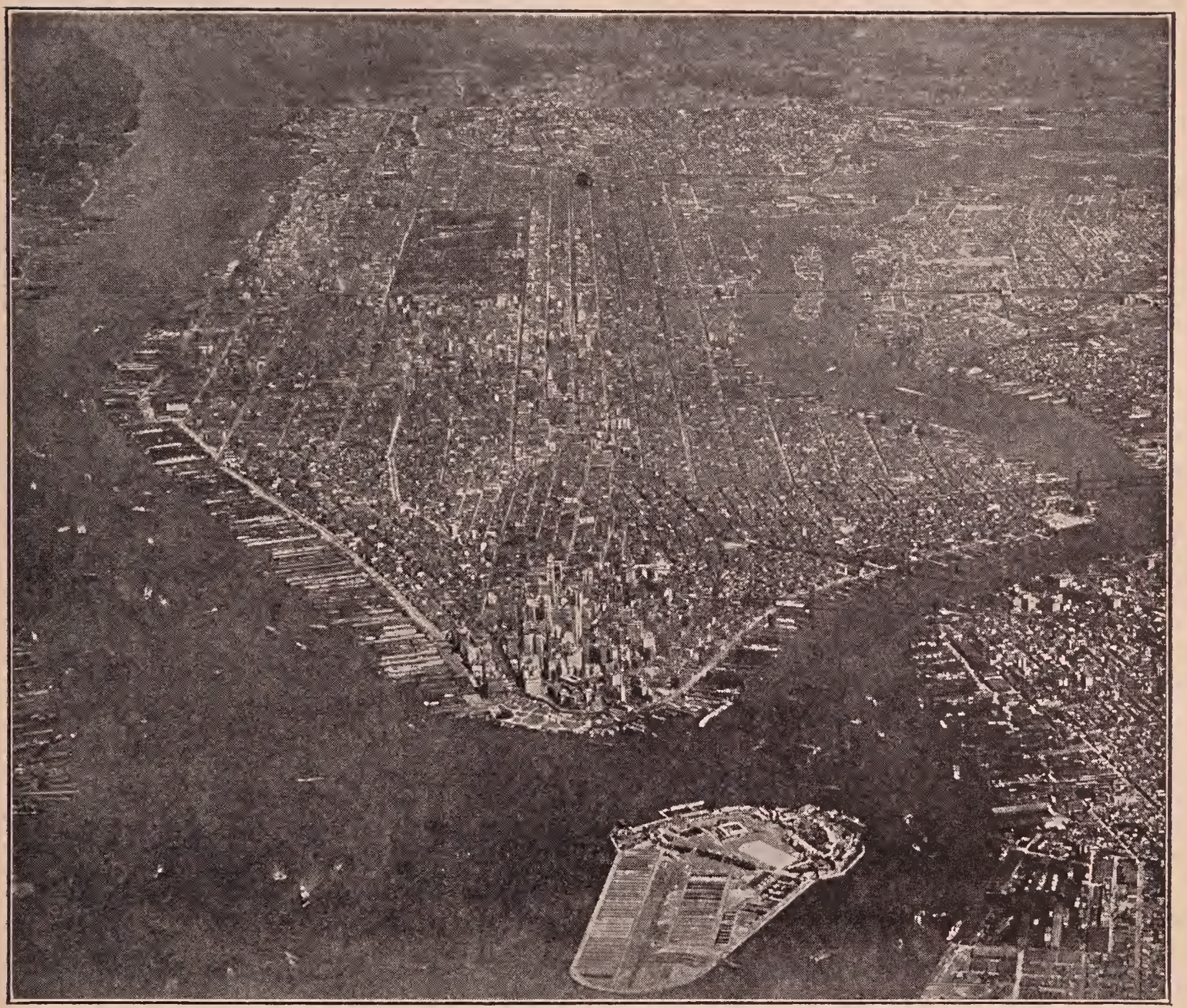
One of the railroad yards in Jersey City.

Carriers for Freight.—Every important railroad in the United States serves New York either by its own railroads or by coastwise traffic from some port.

Hundreds of automobile trucks haul freight from nearby places to the city. So numerous are these trucks that the care of them on the much traveled highways is becoming a serious question. These trucks bring vegetables to the city from the nearby truck farms, silks from Paterson, worsteds from Passaic, and all sorts of merchandise from other cities.

Bridges in New York.—From your sight-seeing tower you can see the great bridges that have been built between Manhattan Island and the other boroughs. Before these bridges, the only means of passage across the river was by ferryboat, an agreeable way to travel if you have the time and the crowds are not too large, but altogether too slow and too few for the demands of to-day.

The first great bridge built in New York City was the Brooklyn Bridge. This bridge was commenced in 1870, and opened for



Courtesy Fairchild's Aerial Corporation.

Manhattan Island. The East River bridges are shown in this picture.

traffic in 1883. Other bridges across the East River are the Williamsburg Bridge, completed in 1903, the Queensboro Bridge opened in 1909, and the Manhattan Bridge opened in 1909. These bridges along with thirty-eight others are under the control of the Department of Plants and Structures. There are several other bridges in the city owned privately. The most notable of these is Hell Gate Bridge across the East River, built and owned

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Hell Gate bridge. One of the great bridges of New York City.

jointly by the Pennsylvania and the New York, New Haven, and Hartford railroads.

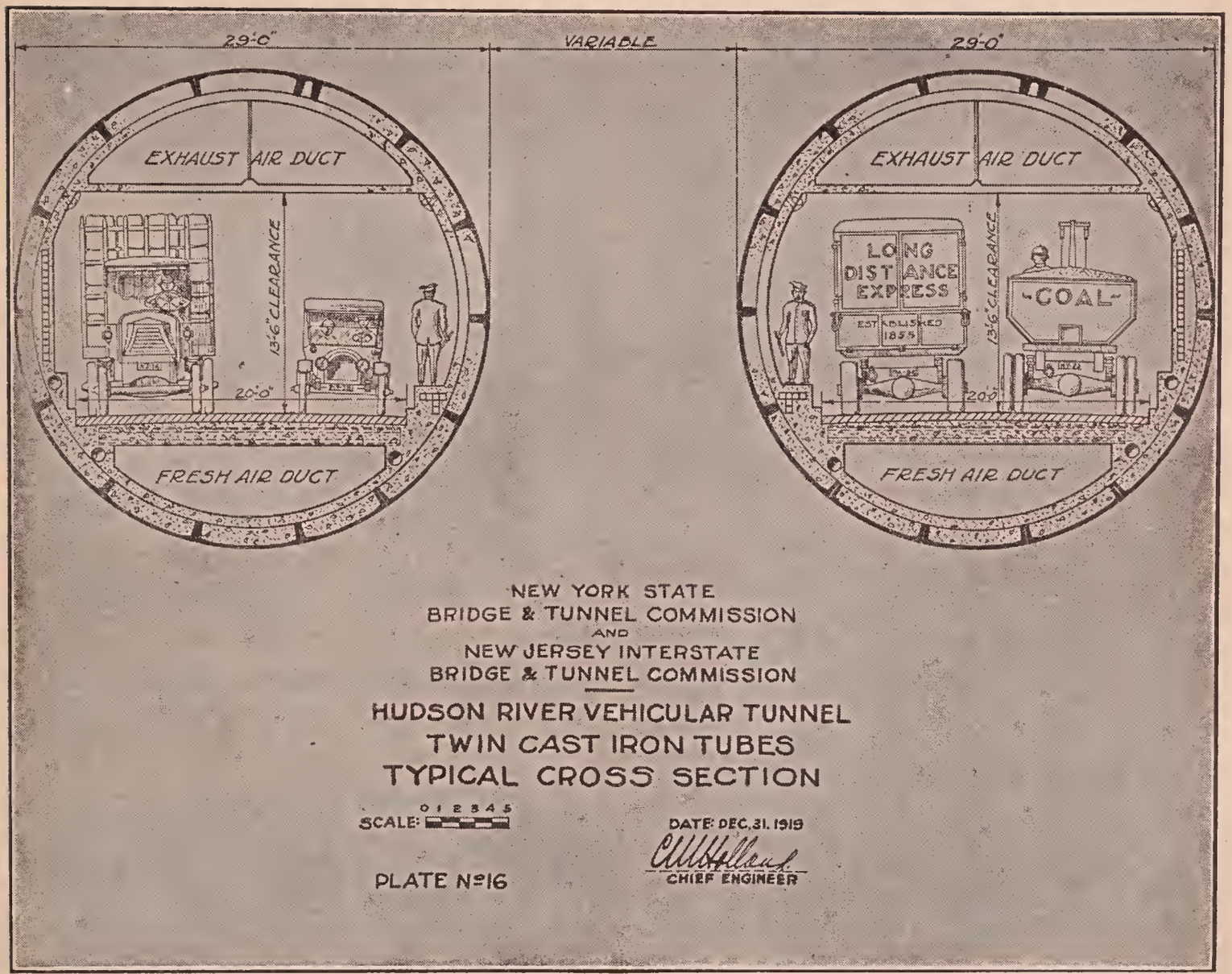
Tunnels Under the Rivers.—As important as the bridges are the tunnels under the rivers. At present there are fourteen of these tunnel systems in operation in and about New York City. The vast number of people carried on the trains daily in these tunnels is proof of their necessity. Other tunnels are under construction. One is to connect Staten Island with Brooklyn. Another of great importance is the New York-New Jersey Vehicular Tunnel. This tunnel is a double one, with two openings in New York and two in New Jersey. The picture shows the plan of the tunnel. A quotation from the World Almanac of 1923 shows what this tunnel will mean to the city:

QUICK TRANSIT FOR FOOD SUPPLIES

Among the advantages which the tunnel will afford will be the quick and certain transportation of merchandise, foodstuffs, and coal from the mainland direct to its final destination in Manhattan, The Bronx, and Long Island, unhindered by climate or other conditions. In the item of coal alone, the entire cost of the tunnel could have been defrayed out of any one of a dozen day's losses in January, 1918, due to the inability to move the coal barges across the river, not to mention the deaths, illness, and physical suffering resulting from the coal famine.

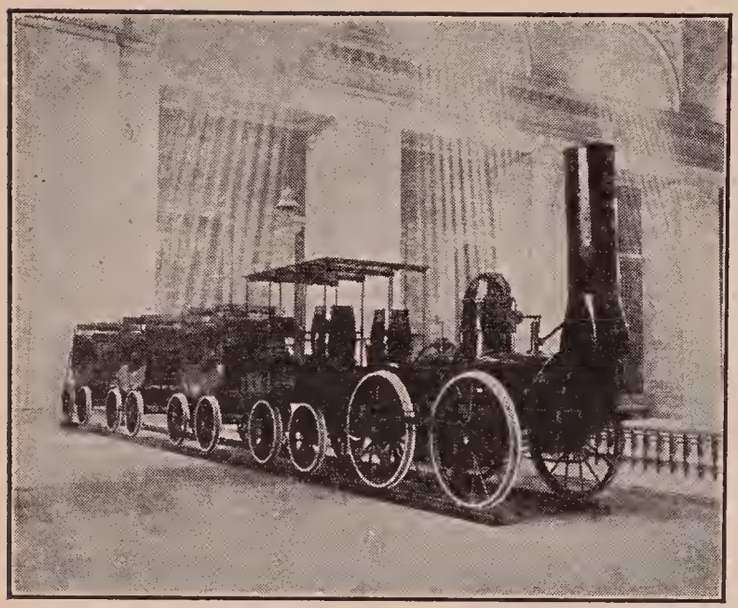
Milk and produce wagons or trucks coming from the New York counties adjoining the New Jersey line could drive directly into the city and deliver their product with certainty many hours earlier than is now possible. Outgoing freight deliveries could also be made more efficiently and in larger volume than is now possible by the present lighterage system. This would do away with the necessity of using valuable water-front property for railroad piers, floats, and bridges on both the Manhattan and Jersey shores.

Finally, the most important question of time in transit would be solved for all classes of freight or passenger-carrying vehicles at no increase in ferry cost. At present, owing to the crowded conditions at certain hours, a truck or car is forced to wait in line, sometimes for several hours,



before it can be driven aboard the ferry, whereas with the tunnel proposed, and its wide plazas at each end, there would not be the slightest delay or congestion at any time.

Travel in the City of New York.— Less than one hundred years ago the only means of getting from place to place in New York besides walking or carriage was the stage line that opened between Bowling Green and Bleecker Street in 1830. In 1832 the first horse railroad in the world started on Fourth Avenue. The first attempt at rapid transit was the elevated railroad opened in 1867 between Battery Place and Thirteenth Street. Small locomotives were used to haul the cars. Since



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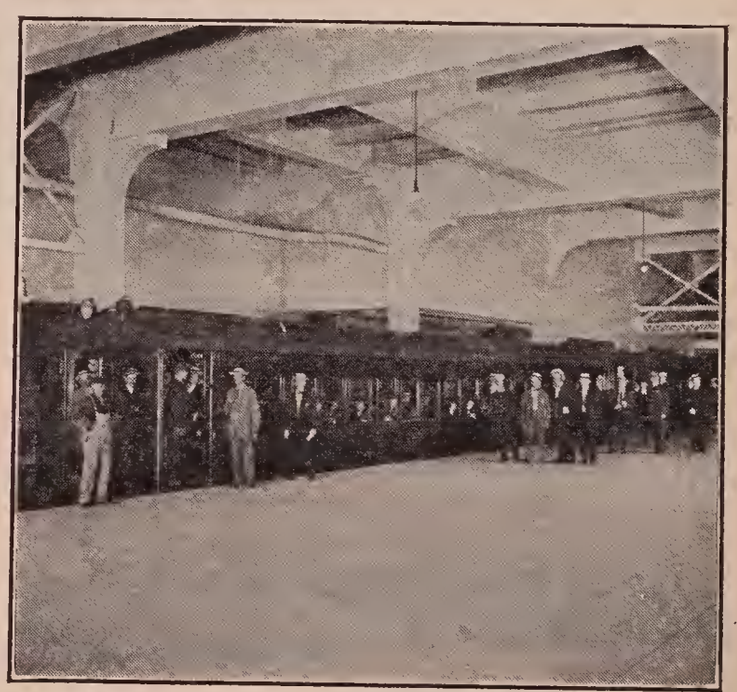
An early railway train on exhibition in the Grand Central station.

that time changes have come rapidly. There are now 880 miles of subway, surface, and elevated railway lines in the city. Many of these lines are two-, three-, or four-track systems. Many miles of new lines are being added each year.

New York City offers many difficulties when it comes to carrying the crowds that wish to travel. In the southern end of Manhattan Island are many of the great business places employing thousands of men and women. Thirteen thousand persons find employment in the Woolworth Building alone, as many as the entire population of a small city. Thousands of these employees either live in the northern end of Manhattan Island or some of the other boroughs or in New Jersey. All must travel a considerable distance each morning and evening. Again, nearly all of the theaters are around the Forty-second Street region. Forty-four of these theaters with seats for 55,911 people are within a circle two thousand feet across. Such conditions cause great numbers to crowd the subways and other lines in the late afternoon and evening.

In a city like Chicago, a resident away from the center of the city may go directly to the heart of the city from his home. Manhattan



Brown Bros.

The lower train level of the Pennsylvania station.

Brown Bros.

An electric locomotive taking a train out of the city.

Island is long and narrow with but a few gateways at each end. Getting the people in and out of Manhattan has been likened to pouring water into a small-necked bottle. Getting them home again is like emptying the bottle, a slow process because there is but one way to get out.

Elevated and Subway Lines.—There are four important elevated lines running north and south the entire length of Manhattan—the Second Avenue, Third Avenue, Sixth Avenue and Ninth Avenue elevated lines. The first subway was opened for use in 1904. The Rapid Transit Subway now has two important systems—the Lexington Avenue line on the east side and the Seventh Avenue line on the west side of the Borough of Manhattan. These two lines run north and south the entire length of Manhattan, extending into Brooklyn and also The Bronx. In addition, the Brooklyn Rapid Transit Company operates a subway line which links up Brooklyn and Manhattan by a route extending under the East River to the Battery, running north to Fifty-ninth

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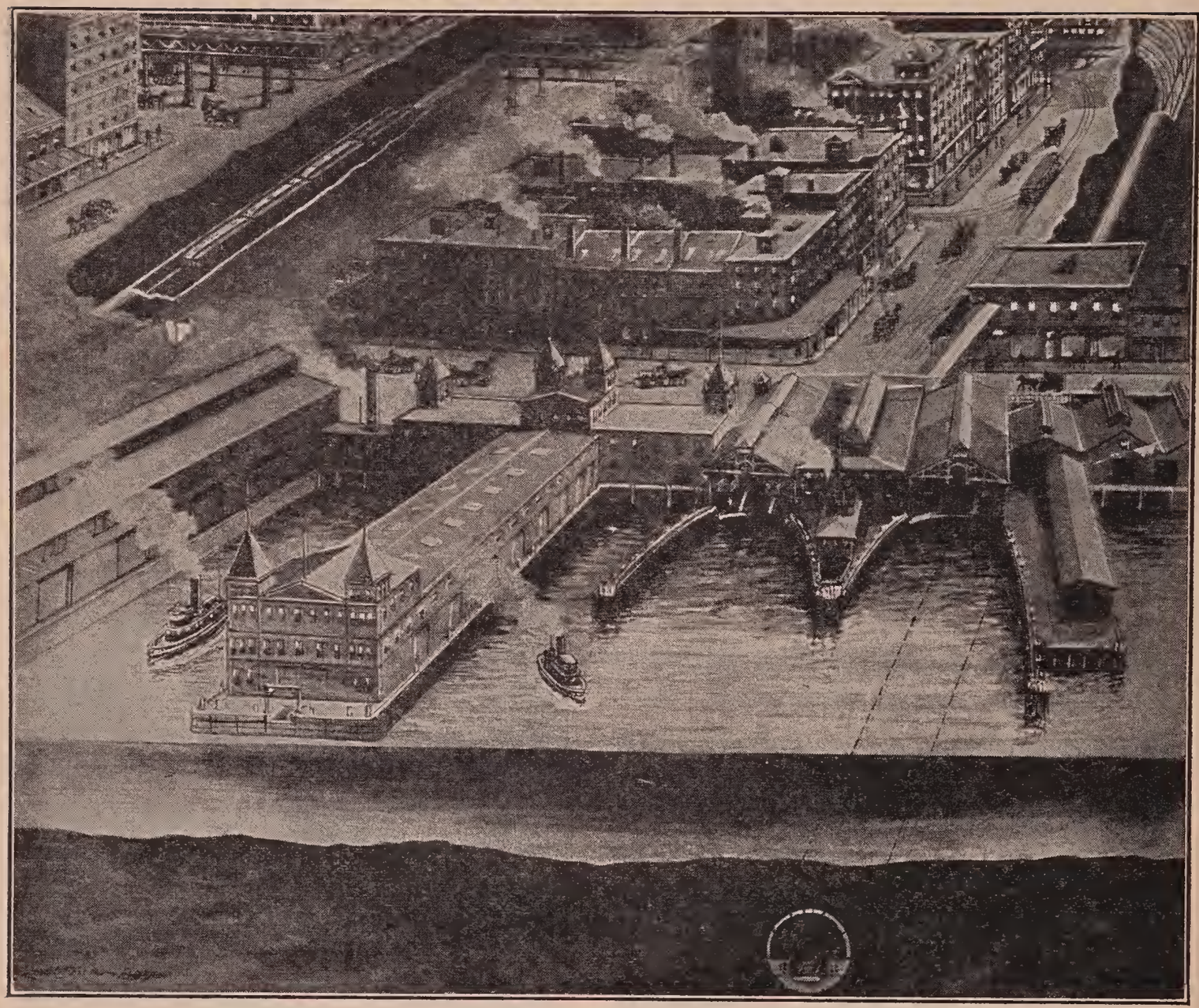
A double deck elevated line.

Street and then across the East River to Long Island City.

One must study the maps of the subway, surface, and elevated lines to get an idea of the many different routes.



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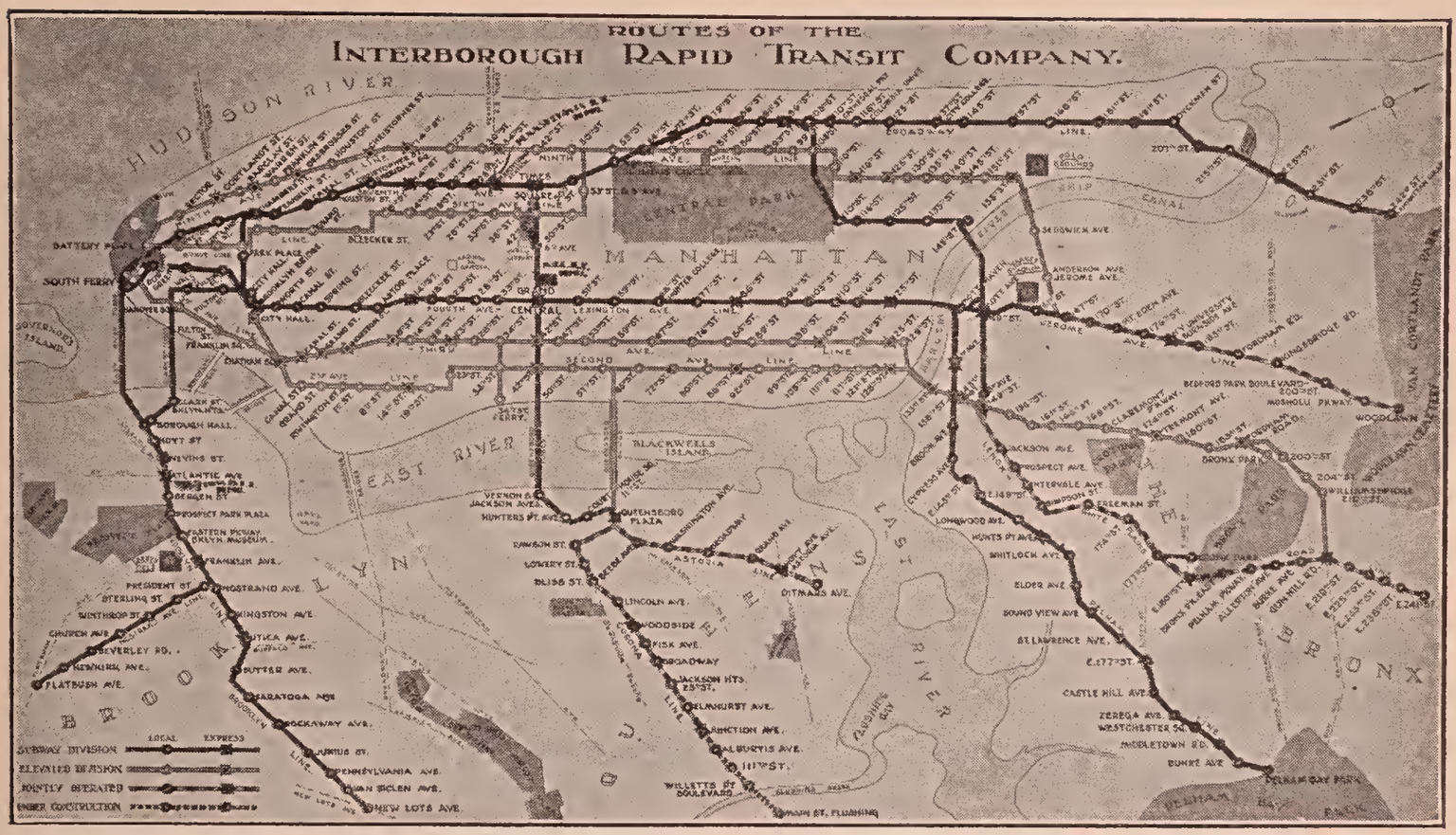
Five methods of transportation to be seen near the Hudson Terminal building.

The control and ownership of the transit lines seem to be the cause of a never-ending dispute. The subways and elevated are in part publicly and in part privately owned; that is, they were built by funds supplied both by the city and by private companies. They are operated entirely by private companies. The street-car lines are owned and operated entirely by private companies. Those opposed to the private ownership argue that more, better, and



cheaper service could be given by the city if it owned the lines and did not attempt to run the business at a profit. It is pointed out by the private owners, however, that in many cases public ownership of such properties has resulted in poor service and waste of money.

Motor Passenger Vehicles.—In addition to the traffic lines operated by electricity like the car lines, there are the omnibuses. Some of these are owned by the city. The most important system, however, is the ten routes maintained by the Fifth Avenue Coach Corporation.

Last, but not least, is the taxi that proves so convenient when we are in a hurry or are caught out in a storm. There are several corporations that control fleets of taxicabs always ready to serve the traveler. The fare is more than on the street car, but the convenience makes up for the extra cost.

The Streets of the City.—Many of us spend some of our time in the city walking on the streets. Let us find out about the system, care, and use of the streets that we use so much.

There are in the entire city 4,627 miles of streets. This is about

one and one-half times the distance between New York and San Francisco. There are 2,295 miles of these streets that are paved.

The system of streets in Manhattan was laid out in 1807. The "Avenues" run north and south and the "Streets" east and west. However, Fifth Avenue was first called "Middle Road," and everything east of it was East and everything west of it was West. The same plan is followed to-day, except that Middle Road is now Fifth Avenue.

It is necessary to have good streets in order to have a progressive city. The sidewalks should be well made and wide enough to take care of all pedestrians. The pavement must be of a good quality to stand the heavy traffic. It should be of a kind suitable for the type of traffic that the street is used for. Asphalt is a good pavement for streets to be used for automobiles, because it is smooth. It is good for congested districts where there are great numbers of people and an unusual amount of dirt and rubbish because it is easily cleaned. In the districts where there is heavy traffic, granite blocks are best. They stand much wear and do not get so slippery in wet weather as the asphalt. Wooden blocks are used where a quiet street is desired. Macadam is used in many parts of the city where there is not much traffic. It is the cheapest pavement and may be used in sparsely settled districts. The pavement in a street is regarded as an improvement to the property along that street and is paid for by special tax assessments on the property that it improves.

If builders wish to obstruct a street while building is going on, they are obliged to get a permit from the city. If a company wishes to use a street for a car line, they must first obtain a franchise from the Board of Estimate and Apportionment. This franchise is a contract between the city and the company, and states what privileges are given the company and what the company is to do for the citizens.

The surface is but a part of a New York street. Below the surface are subways, water mains, sewers, gas mains, conduits for electric lights, telephone and telegraph wires. Indeed underneath some streets are to be found two and three levels occupied by subway and tube-train lines.

Crowded Streets.—How busy are the streets? In some places they are as quiet as the "main" street of a country village, but in the busy sections nearly as many people pass along a single street every day as the entire population of the city of Newark, New Jersey. It is estimated that an average of more than 350,000 pedestrians and 21,000 vehicles traverse Forty-second Street daily. More than 32,000 people are employed by firms along this street. At the corner of Forty-second Street and Fifth Avenue, several policemen are needed to care for the traffic.

How can you serve your city in caring for its streets? You can do your part in keeping the streets clean. You can help to avoid accidents by observing the rules of traffic and being careful. You can help others to do the right thing by not doing the wrong thing yourself.

Accident Prevention Rules.—Because of the great number of deaths caused by drivers of vehicles, the Police Department of New York City has undertaken a campaign of instruction in the schools and elsewhere on "Accident Prevention." These rules are very simple, but are often violated by pedestrians either through thoughtlessness or impatience. Write out five rules that you would have your little brother or sister observe in walking along the street.

Questions

I. Explain why New York may be called a world market.

II. Why is it so important that there should be so many bridges between Manhattan and Brooklyn?

III. Why are more subways urged instead of surface or elevated lines in the city of New York?

IV. Most accidents are preventable. Explain.

CHAPTER XVIII

The Business of the City

New York a Business Center.— Before we can have a city or any group of people in one place we must have something to call them there. The interest that Europeans had in trading in the New World was one of the prime reasons for their coming to America. The first settlers of Manhattan built their homes there because it was a good place from which to carry on business with the Indians. It was at the end of the Hudson River and on the bay, a convenient place from which to travel into the mainland as well as a good place to ship from. These same conditions have as much influence upon the life of the city as they did in the days of the Dutch settlers. With its ideal harbor, great waterfront, and location easily reached from the prosperous country to the west, New York is an ideal place for trade and manufacture.

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The Pennsylvania station in New York City. It faces Seventh Avenue.

An ocean liner.

Over one hundred steamship lines come regularly to the port. These numerous lines keep the city in touch with all ports of the

Brown Bros.

The New York Custom House.

world and enable shippers to get their goods away without delay. If one boat is missed, there is always another within a short time.

Eleven great railway systems have their terminals at the port of New York.

With the whole world as a market as well as a source of raw materials, New York has become the great manufacturing center of the United States. It produces more than twice as much from its manufacturing plants as Chicago, the second industrial city in the country.

Great Industries of New York.— First in importance among the city's industries is the wholesale manufacturing of clothing. Over half of the clothing worn in the entire country is made in New York City.

It would be impossible in a book like this to tell something of all the industries to be found in the city. A table is shown below that gives some interesting facts about some of the more important ones:

LEADING INDUSTRIES IN THE CITY OF NEW YORK, 1919

	No. of Establishments	*No. of Persons Engaged*	*Capital Invested*	*Value of Products*
Printing and publishing	3,316	88,514	$240,105,119	$411,138,928
Men's clothing	2,516	66,037	227,328,947	564,407,739
Foundry and machine products	1,382	42,580	133,376,137	155,595,160
Women's clothing	5,089	119,627	251,327,900	866,243,561
Tobacco	1,457	19,832	88,360,337	147,216,742
Bakery products	2,319	28,033	69,341,039	173,510,009
Slaughtering	165	6,497	48,256,410	191,837,831
Copper, tin, and sheet-iron	492	13,451	41,489,281	59,681,585
Musical instruments	102	9,064	36,064,308	40,091,833
Paint and varnish	113	5,243	38,064,283	57,360,688
Millinery and lace goods	1,789	34,045	52,897,410	162,186,055
Silk and silk goods	126	7,773	43,761,503	54,526,901
Patent medicines	432	10,464	44,989,493	75,280,374
Jewelry	665	7,551	35,685,377	65,391,579
Furniture	479	9,626	21,521,884	42,590,856

It may be interesting when thinking of the industries of the city to note that the combined product of all the industries of

Brown Bros.

Bush Terminal buildings and docks in Brooklyn.

New York is greater than the combined output of Pittsburgh, Cleveland, Cincinnati, Detroit, Boston, Milwaukee, and Buffalo. One person out of every seven in the city is employed in manufacturing.

The manufactured articles go everywhere. Over one-half of the foreign trade of the nation is done in New York. From what has already been told, it can be seen how large a share of the domestic trade is done here.

Many Banks in New York.—With all this manufacturing and trading being done in the city, it follows that a great deal of banking business must be done in New York. There are one hundred and twenty-four banks in Manhattan alone, and many more in the other boroughs. These range from small banks in some of the small communities of Staten Island to the largest banking houses in the world. Some of the largest among these are: National City Bank, First National Bank, National Bank of Commerce, Bankers' Trust Company, Chase National Bank, and the Guaranty Trust Co.

The Ever-changing City.—A visitor to New York for the first time

Brown Bros.

New York Stock Exchange.

is likely to get the impression that the city is being built for the first time now. In nearly every block great structures are being piled up

toward the sky, each one higher and finer than buildings erected last year in the same block. Every hour of the working day sees about twenty buildings of various kinds completed in New York City.

Many large department stores and hundreds of small shops are necessary to meet the needs of the six million people in New York, and other millions who come to the city to do a great deal of their shopping.

So much business calls for hundreds of laborers. There is an ever-increasing demand for more men and women to run the machines and do the other work necessary to keep all the hundreds of manufacturing plants in operation. The growth in population is several thousands a month. Many people in the city remember when the population was but two hundred and fifty thousand. No doubt many of us who are living to-day will live to see a city of twenty-five million.

The City's Part in Business.—All this business could not be done unless the city does its part. What is the city's relation to business? How can it help business?

It must provide means of travel so the worker can reach his work. All this has been discussed to some extent in another chapter.

A special city department, the work of which is the improvement of commerce and transit conditions, is the Department of Plants and Structures. The head of this department is the Commissioner of Plants and Structures appointed by the Mayor. He has supervision over construction, repair, and management of bridges and tunnels constructed at the expense of the city. This department controls city-owned ferries, also all buildings, boats, vehicles, etc., owned by the city and used by the various departments.

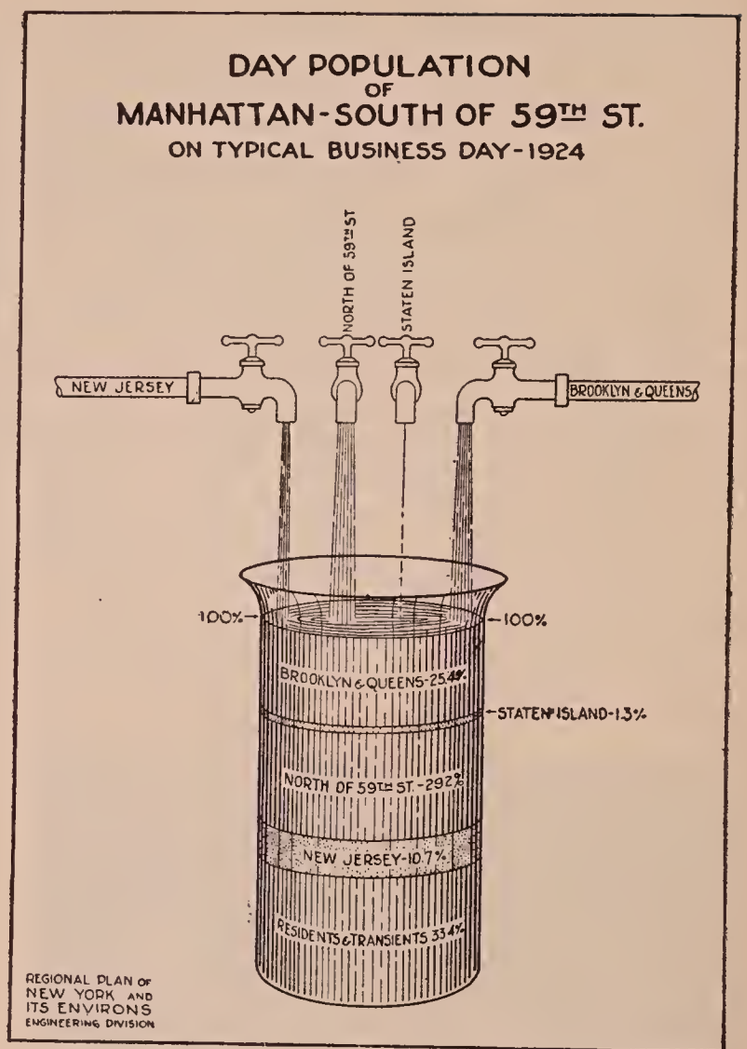
Brown Bros.

On the way from the Great Lakes to the ocean by the way of the Barge Canal.

The Department of Docks has the supervision of all waterfront property belonging to the city. All private docks are under the Dock Commissioner's control, who is also director of the port.

It is becoming more apparent every day that there must be some additions to the many ways that already exist for carrying passengers about the city. The Transit Commission was created to supervise all railroads, street railroads, and stage or omnibus lines or routes operated in whole or in part in New York City. The members of this commission are appointed by the governor of the state. This commission is also required to provide a plan to relieve the overcrowded condition of the transit lines of the city at present.

Many plans have been suggested by various people for improving the city streets so it will be easier for large crowds to be moved more conveniently. These plans will be discussed in another chapter about city planning.



Courtesy Russell Sage Foundation.

How the city fills up every business day from the suburban area.

Questions

I. Give all the different things necessary for a good trading center.

II. What is the advantage of having a railroad terminal in the city?

III. What are the advantages that New York has for foreign trade that a city like Chicago lacks?

IV. Why are good transit conditions necessary for a city like New York?

CHAPTER XIX

Building and Buildings

New Buildings Everywhere.—From day to day certain sections of the newspapers give accounts of building operations in the cities where the newspapers are published. One has but to take a drive through any part of metropolitan New York to become impressed with what seems to be a rush in constructing various kinds of buildings. In some of the suburbs and in the residential sections of the various boroughs of New York, street after street is lined with new or partly built homes. Factories and stores are either being built on vacant lots or are replacing older structures that have been wrecked to give way to something better.

Brown Bros.

A skyscraper near Times Square.

The Sunday editions of the great dailies give a complete section to real estate and building. An account of building operations in New York taken from the February eighth (1925) issue of the New York *Herald-Tribune* gives the following:

Construction Awarded in Greater New York During Year

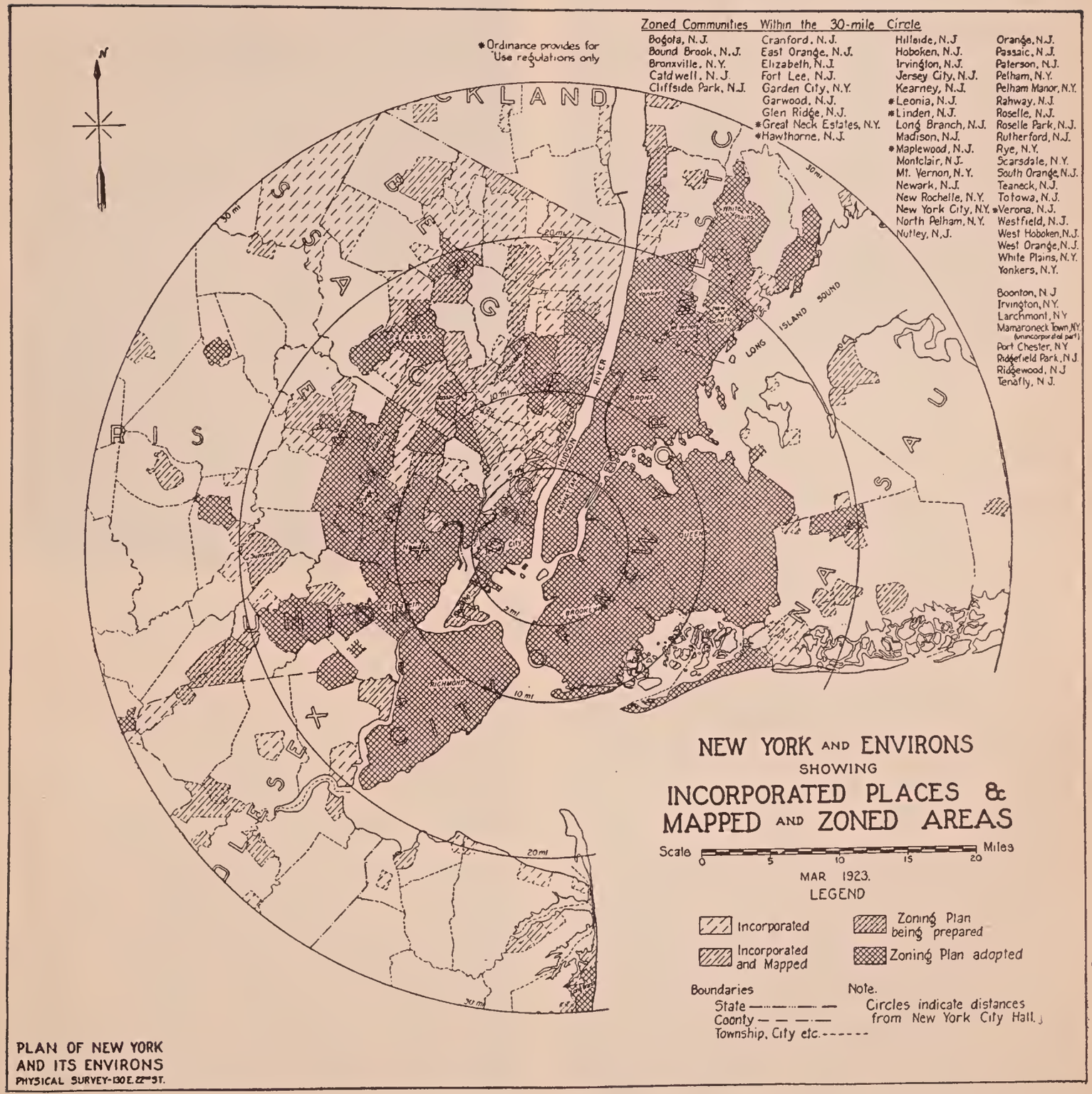
Classification	*Number Projects*	*New Floor Space, Sq. Ft.*	*Valuation*
Business buildings	1,525	27,075,300	$162,720,800
Educational buildings	194	7,227,300	61,313,800
Hospitals and institutions	56	1,306,400	9,928,600
Industrial buildings	279	3,407,100	50,253,700
Military and naval buildings	3	1,500	28,600
Public buildings	30	1,383,000	7,113,100
Public works and utilities	50	426,200	24,552,900
Religious and memorial buildings	107	1,083,100	11,672,700
Residential buildings	7,970	106,824,100	549,527,000
Social and recreational buildings	123	1,683,800	13,795,000
Total	10,337	150,417,800	$890,906,200

December 1, 1923—December 1, 1924.

When the new tunnels, bridges, and subways made it possible to reach vacant areas in the outlying boroughs, there was a rush of home seekers and business men to those parts. In the seven years from 1916 to 1923, Manhattan's outlay in new buildings increased from $134,000,000 to $204,000,000. Brooklyn, however, went from $42,000,000 to $284,000,000, while The Bronx jumped from $18,000,000 to $128,000,000 and Queens from $21,000,000 to $156,000,000—all of which shows the effect of better transit facilities; also that the whole metropolitan district will increase in population just as fast as conveniences are furnished the people to live and carry on some business.

Inspection of Buildings.—With so much building going on, it is necessary to have rules and regulations as to planning, placing, and construction of the buildings so that the safety of the public, the health of the dwellers, and the attractive appearance of the city shall be preserved. To this end a Superintendent of Buildings is appointed by the Borough President in each borough. All plans for new buildings must first be approved by inspectors of the examining division of the superintendent's office. Every building must comply with the law as to thickness of walls, building material, strength of floors, and construction of and material to be used in the chimney. The building must have suitable plumbing, first-class electrical wiring, gas, water, and waste pipes, and must be approved by the construction inspector.

All tenement houses must meet the requirements of the laws which are enforced by the Commissioner of the Tenement House Department. These laws define tenement houses and tell how many windows each room must have and how they are to be placed. It says each room must be at least nine feet high, all walls must be dampproof, a sink with running water must be provided for each apartment, and if the tenement is more than six stories high, it must be of fire-proof construction. All plumbing must be repaired immediately. The ladder or stairway leading to the roof must be free from all encumbrances. Fire escapes must be kept painted and in good repair. A light must be kept burning near the stairs on the entrance floor, and upon the next floor above the entrance floor

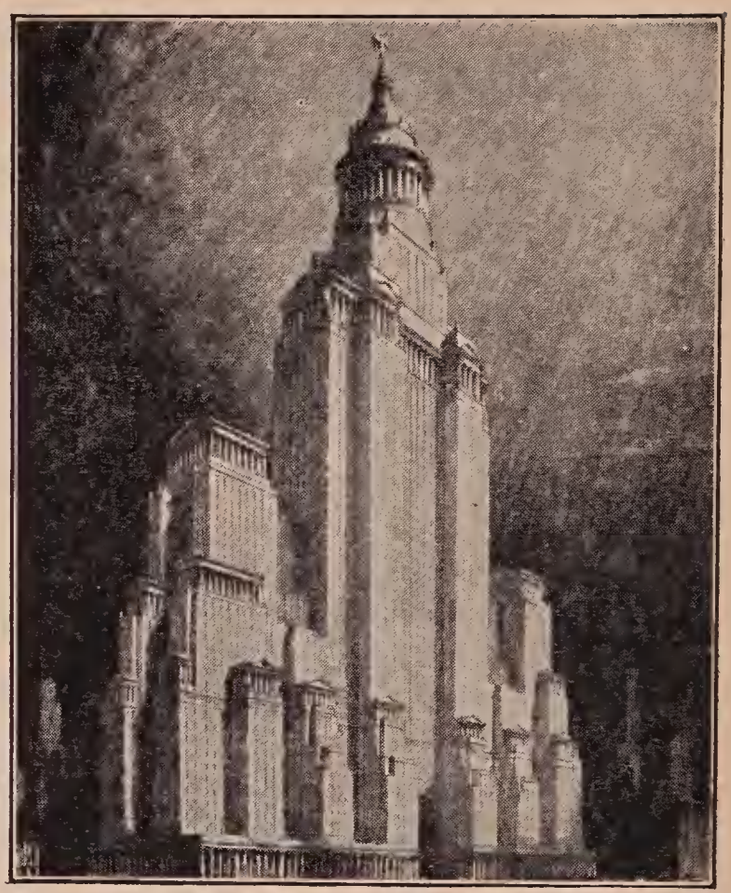


Courtesy Russell Sage Foundation.

every night from sunset to sunrise, and upon all floors from sunset until ten in the evening. No room shall be so overcrowded that it affords less than four hundred cubic feet of air to each adult and two hundred cubic feet to each child under twelve years of age.

All tenements meeting these requirements are "new law tenements." This law was passed in 1901. The "old law tenements," or tenements built before 1901, are inspected regularly to see that health conditions are kept at a satisfactory standard. The Tenement House Department has charge of the apartment houses as well as tenements.

In all buildings used for business purposes inspectors from various city departments see to it that building laws, labor laws, health laws, and fire laws are complied with. The State Labor Department inspects buildings to determine whether the workers' safety and health are provided for. The modern factory has a fully-equipped health station that cares for all emergency cases or illness of its workers while on duty. Many serious factory fires in the past have shown the necessity of constant inspection and watchfulness against fire by the Fire Department.



Brown Bros.

A skyscraper of the future.

Zoning and Building.—The "Zoning Law" is a protection against placing undesirable buildings or business places where they are not wanted. A residential center might be spoiled by a factory or a store placed in its midst. The grouping of certain types of buildings and business in sections set aside for them is one of the best moves in city planning. The regulation of the height of buildings and their style of construction ac-

cording to the width of the streets is also provided for by the zoning law. The skyscraper of to-day is not the nuisance some of the earlier high buildings were. They cut off their neighbor's light and made a cavern of the streets upon which they were placed.

The modern skyscraper is an American product. There are high structures in other parts of the world, but there is nothing that compares with the giant structures to be found in New York and other American cities. A novelist once called this the "Vertical City." Can you give the reason why?

The Skyscraper of 1880.—The first real skyscraper built in the United States was the Mills Building on Broad Street, Manhattan. This building was erected in 1881–1882 by Darius O. Mills. It was ten stories high and was more of a wonder in its day than a fifty-story building to-day.

There was a reason for a ten-story building being wonderful in 1880. At that time the two essentials of tall building construction had not been perfected. The elevator of those days was the slow-moving hydraulic type, a little better than the old steam "lift" which until that time was used in the

The Woolworth building.

larger buildings. The electric elevator came into general use in 1888, and has been made better and better until it is the perfect machine that is to be found in the finest office buildings. It makes an office on the fortieth floor as accessible as one on the third.

The skeleton frame of structural steel is the second essential of high buildings. When a way was found to have each floor of a building support its own load, it was not necessary to plan for thick walls to support the weight of the building. The walls of our tall buildings are hardly more than an outside covering.

The Old and New Skyscraper.—Just now, as this book is being written (1925), the Mills Building

is being wrecked to be replaced by the new Equitable Trust Building. The Mills Building was 120 feet high; the new building will be 500 feet high. The old building was planned in part as it was built, because it was an experiment. The new building was planned in every detail, down to the last inch of plaster in an office. The foundation of the old structure was of wooden piles driven into the earth; the foundation of the Equitable Trust Building is of solid concrete on bed rock. There will be five basements below the street level. The walls of the old building were a serious problem, but the walls of the new building will be merely a sheeting of masonry a foot thick. Eight hundred tenants filled the Mills Building; the Equitable Trust Building will accommodate five thousand tenants. Instead of seven elevators which took care of all who wished to use them in the Mills Building, the new building will have twenty passenger elevators and eight private or semi-private cars in certain parts of the building.

The interior of the new building will be beautifully designed. The ceilings, walls, and floors will be finished so as to make them as attractive as possible. This was not always done in the old structures, partly because it was not thought essential and partly because materials for decorating were not so easily obtained as at the present time. Like others of the modern skyscrapers, the exterior of the new building will be much better designed than that of the old building that it replaces. All this is a part of the progress in modern building.

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Cathedral of St. John the Divine as it will appear when completed.

There are many famous buildings in New York. A building need not tower to the sky to be a great building, however. One of the most famous as well as one of the most beautiful buildings in the

city is the City Hall. Mention is made elsewhere of the Public Library on Fifth Avenue at Forty-second Street. The Grand Central and the Pennsylvania terminals are both wonderful structures in size and beauty of design. None of these buildings are skyscrapers.

For those who may be interested in identifying the buildings in New York, a list of buildings along with some facts about them may be found on pages 155-156.

There are certain buildings in New York which are famous for their historical associations. There is Fraunce's Tavern at the corner of Broadway and Pearl Street. Here Washington bade farewell to his officers at the close of the Revolutionary War. It is preserved to-day as an historical landmark, and the rooms in the upper part of the building have many old relics of Revolutionary days.

The Jumel Mansion in the uptown section of Manhattan Island is another famous landmark of the period immediately following the Revolution. At the corner of Two Hundred and Seventh Street and Broadway is another old building restored to its famous state when it was used by General Washington as his headquarters at the

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St. Patrick's Cathedral on Fifth Avenue, one of the great churches of the world.

time the American Army was preparing to cross into Jersey in 1776 for its retreat, which ended in the glorious victory at Trenton on Christmas Day.

There were many other famous old buildings in and around New York which have been destroyed by the march of progress. The site of the mansion which was the home of the first president of the United States is now occupied by one of the towers of the Brooklyn Bridge at Cherry Street and

Franklin Square. In Europe the people for centuries have taken pride in preserving their historic places. In America we have thoughtlessly destroyed many of them, and have thus deprived future generations of the opportunity of coming into contact with places and objects that are sacred to the name of patriotism.

Questions

I. What does a great deal of building in the city indicate?

II. Why must buildings be inspected while being constructed?

III. What are the reasons for a strict tenement-house law?

IV. How does a public garage placed in the midst of fine homes spoil the neighborhood as a select residential center?

V. Why is the elevator necessary for skyscrapers?

VI. What are the advantages of tall buildings?

VII. What is the value of an old building which has been the scene of great events in history?

CHAPTER XX

Laws and Lawmakers

Deportment Records.—In nearly all schools where monthly report cards are given to the pupils, a record is made on that card of the pupil's conduct or deportment. A high mark for conduct means that the pupil has carefully observed the rules of the school. These rules are not necessarily written rules. What we know of "right" and "wrong" guides us in our conduct as much as the printed rules. This is as true in life outside and beyond the school age as it is in the school. The majority of the citizens of our country are known as law-abiding men and women, yet they do not know the wording of many laws.

Necessity of Laws.—There must be a standard of conduct, however, and it is therefore necessary to have laws passed to cover all possible questions that may arise.

Throughout the chapters of this book that deal with the life of the people, mention is often made of the various departments, the officers, and laws that decide what all citizens must do to avoid arrest or punishment.

Every city and town in the met-

ropolitan district has a charter or similar document that outlines its plan of government. In general a mayor is provided for, as are lawmaking bodies. Courts of different kinds are called for. These courts decide what laws mean, and they also determine the punishment for law breakers that appear before them.

The City Charter.—New York is so large that its charter must provide for many departments to care for all its activities. Other cities of the district have departments and offices as they may find it necessary. A city as large as Newark, New Jersey, though not so extensive in size as New York, has many questions in common with the larger city.

It must not be forgotten that many of the laws made by the state legislature in New York and the state assembly in New Jersey apply to the people in the cities as well as to other citizens of the state, unless the law is designed to affect some particular community.

State Laws.—The Legislature of New York State is provided for in the state constitution. The Legislature is the lawmaking body of the state. It consists of two

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The state capitol at Albany.

branches, the Senate and the Assembly. The Senate is the upper house and has fifty-one members. The Assembly has one hundred and fifty members. The Senators are elected at the same election at which the Governor is elected (every even year), and they serve for two years. The members of the Assembly are chosen for a term of one year only.

The Legislative session is held annually beginning on the first Wednesday in January. Special sessions may be called by the Governor.

In New Jersey, the lawmaking body is called the State Assembly. It consists of twenty-one Senators

and sixty Assemblymen. The Assembly meets annually beginning the second Tuesday in January. The term of both Senators and Assemblymen is one year.

Both these state lawmaking bodies work after the same plan as the United States Congress. That is, various committees are appointed, and the proposed laws must go through the hands of the appropriate committee. While being considered in the Legislature, the proposed law is called a bill. If the bill meets the approval of the committee, it is reported to one of the two houses which considers it. If it is passed by that house, it is sent to the other house. If it receives enough votes to pass it in the second house, it is sent to the Governor for his approval. The Governor may either sign it, which means approval, or he may veto it. If he vetoes it, the proposed law may still become a law by being repassed by both houses by a two-thirds vote. The details of the method of handling bills is set forth in the state constitution. Many of the processes that the bills go through while in the hands of the committees and while being considered on the floor of the Legislature are to be found in the rules and regulations that have been framed by the legislators themselves.

Besides the state laws there are national laws framed by the United States Congress.

City Affairs.—For questions that concern the city alone a certain amount of home rule is desirable. There are problems in every city that concern only the citizens of that city. Many of the chapters of this book have dealt with such questions.

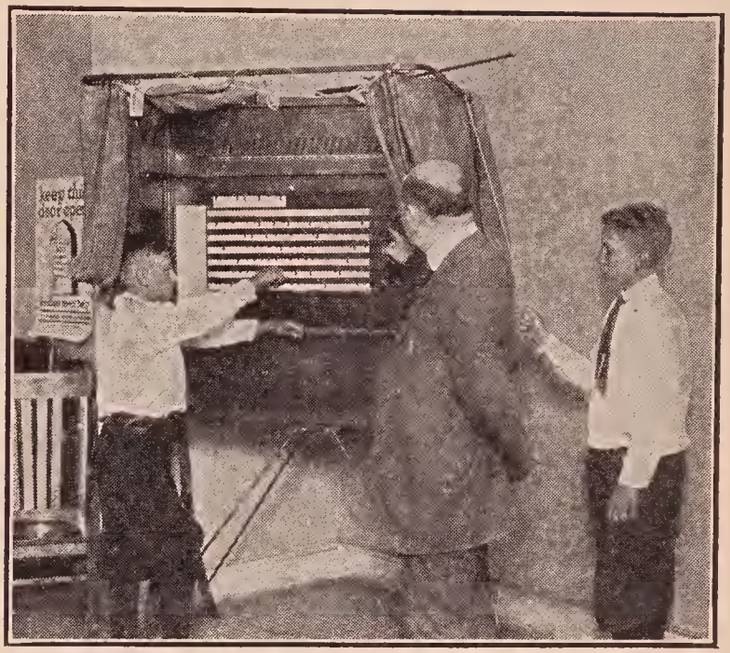
The charter of the city of New York fills a large volume. The laws dealing with Greater New York would fill several volumes. The State Legislature granted the original charter to the city and has added many amendments to it.

In order that the city might have more of a voice in the many laws concerning the city's affairs which the Legislature passes at every session, an amendment has been added to the state constitution which is known as the Home Rule Amendment. By the provisions of this amendment, the bills that affect New York City must be sent to the Mayor within fifteen days after their passage. The Mayor signs the bill if he approves of it. If he does not approve of it,

he returns it to the Legislature where it may become a law if a majority of both houses again approve of it. If the legislative session ends before the fifteen days are up, a "pocket veto" may stop the bill from becoming a law.

City Lawmakers. — The city's legislature consists of sixty-seven aldermen elected from the various aldermanic districts in the city, the five borough presidents, and the President of the Board of Aldermen—a total of seventy-three members. The Board of Aldermen meet at least once a month, except during July and August, in the Aldermanic Chamber in the City Hall. Tuesday is the day of the meetings. The President of the Board of Aldermen is the presiding officer. This same officer becomes acting mayor in the Mayor's absence. If the Mayor's office becomes vacant, the President of the Board of Aldermen becomes mayor and may hold office until the first day of January succeeding the election of a new mayor.

The Board of Estimate and Apportionment which consists of the Mayor, Comptroller, President of the Board of Aldermen, and the presidents of the boroughs of the



Learning how to vote at an Elmhurst, L. I. Public School.

city is really a Board of Directors of the city's affairs. Its power is very broad. Many of the policies of the city are framed by this board. It has taken over so many of the powers once exercised by the Board of Aldermen that it far exceeds that board in power for guiding the affairs of the city. This board meets at the City Hall on Fridays.

Expenses of the City.—The most important work done by the Board of Estimate and Apportionment is the preparation of the annual tax budget. The heads of the various city departments are required to prepare estimates of the amounts necessary to conduct their departments before Septem-

ber tenth each year. From these estimates the Board of Estimate and Apportionment must prepare, between October first and November first, a budget of estimated amounts required for carrying on the city's business for the following year. After public hearings on the proposed budget, it is sent to the Board of Aldermen, which body must adopt the budget within twenty days. This board may reduce the budget, but it cannot add to it. If the Board of Aldermen fail to pass the budget, it becomes effective as proposed by the Board of Estimate and Apportionment. The Mayor and comptroller are required to sign the budget before it becomes a public document. Either the Mayor or Comptroller may reduce the budget, but they cannot add to it.

A study of the annual budget of New York City gives a very good idea of the great size of the city. A city of six million people must transact an immense amount of business in order that all the needs of such a vast population may be satisfied. The budget for 1925 called for an expenditure of $371,252,346.64. Eighty-three items are provided for. Three of the large items are: Police Department, nearly $40,000,000; Fire Department, $19,000,000; and Department of Education, nearly $80,000,000.

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A jury trial, boys and girls taking the leading parts.

Privileges of the City Family.— The American city is not perfect in the laws that it has to regulate its affairs. It is true, however, that the privileges offered to the city family are many. With good schools designed to meet the need of every class; with a police system providing safety for all; a fire department protecting property against loss; with a good water supply; and with an efficient system of keeping the city clean, a good deal is done to assure contentment. If we add the hospitals

and asylums for the sick and needy and the reformatories and jails for the offenders, much of the worry is removed from life except for those who wish to break the laws provided for the welfare of the people.

Questions

I. How do we know what is "right" or "wrong"?

II. Why must we have laws?

III. What are some of the questions that cities must deal with that do not concern people in other parts of the state?

IV. What do you mean by a budget?

V. Why should so much money be spent for education?

VI. Do we have laws in the home?

CHAPTER XXI

Planning the City

Laying Out the First Streets.— The first streets in New Amsterdam were laid out in a haphazard fashion. The early settlers built

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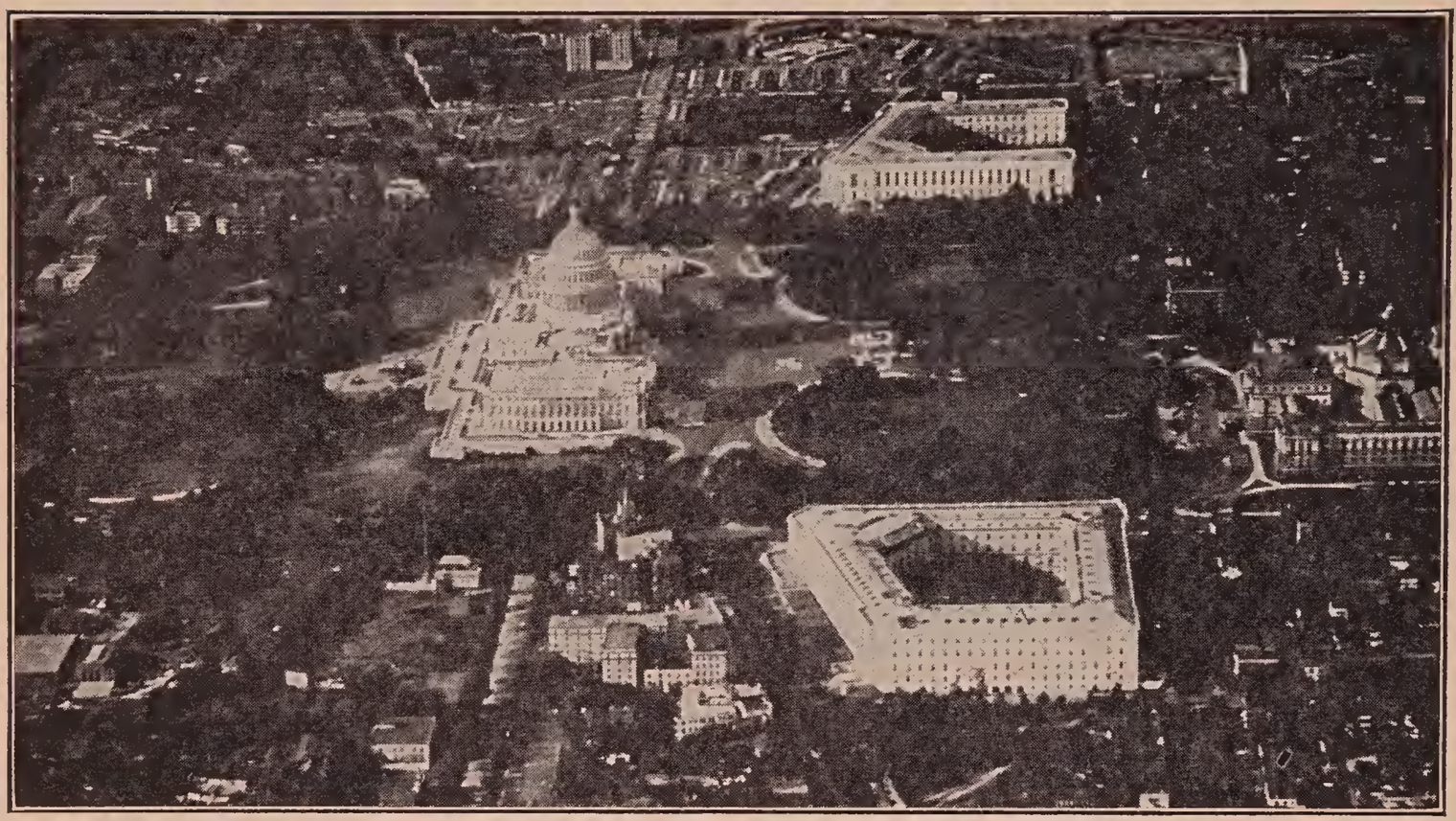
An aerial view of lower New York.



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An air view of the City of Washington.

their houses wherever they wished. A footpath became a street after a few houses were built along it. Cow paths made by the cattle going to and returning from the pastures sometimes became streets. All this resulted in the tangle of streets to be found in lower Manhattan to-day. Only two streets were of any great length. One led from the Battery to the ferry connecting the town with Brooklyn, and the other led northward through the center of the town. This road was the beginning of Broadway. Another pathway became a street when the wall was erected on the present site of Wall Street. Many other famous streets were first paths to a brook, to a woodlot, or perhaps to some shady lane that served as a pleasant walk.

Broadway was at one time called Bloomingdale Road, or the "Boulevard." It was a country road leading far out of the town in those days. There were many fine country estates along its course.

The 1807 Plan.—The plan of north and south avenues with the cross streets as the city is now,

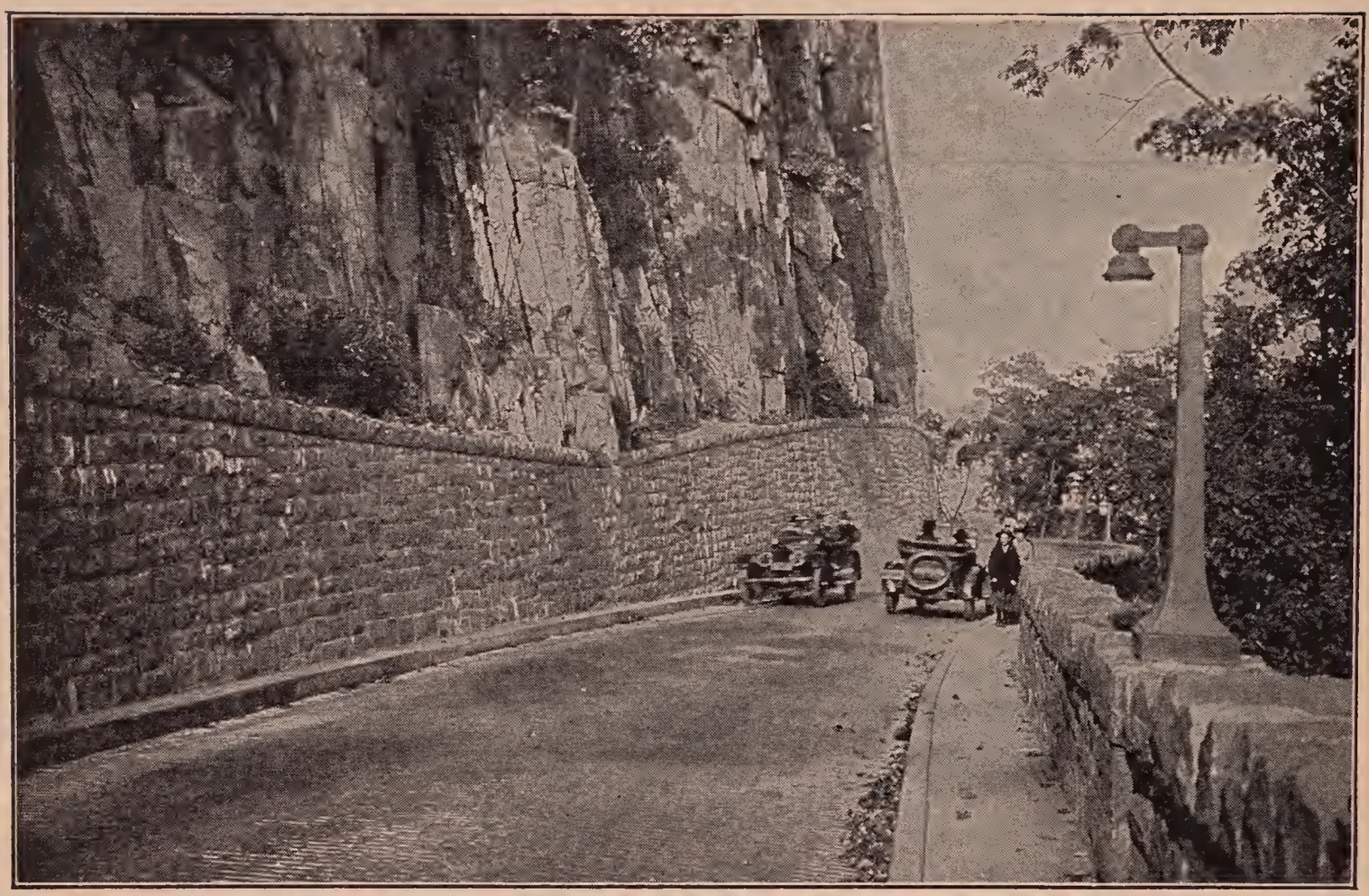
was the result of a plan of a committee of three men headed by Governor Morris in 1807. They gave the matter careful thought, but they made a great mistake. Their plan gave no opportunity for developing a city beautiful. There was no place to start from and no place to go by way of planning an arrangement of buildings in an artistic manner.

The city of Washington is an example of a city arranged well as to its streets and the placing of buildings. It is also easy to handle traffic in that city because of the numerous streets leading to the center of the city and the many streets that may be used to pass around the busiest areas. A picture of Washington is shown on the opposite page giving an idea of its plan.

Planned Streets.—It should not be said that nothing has been done in New York City and the area outside by way of good planning of streets. Many of the suburban highways are beautiful drives. No other great city in the world has leading from it more well-paved highways over which the automobilist may within a half hour travel from city streets to beautiful mountain country. Westchester and Putnam counties to the north on the east side of the Hudson River are netted with good roads. On the west side of the Hudson good roads lead everywhere.

Many of the newer areas in the outlying boroughs have streets that are planned to best serve a large population to come.

The parkways constructed and planned are a part of the plan to beautify the city, and furnish the traveler a thoroughfare that will add to the pleasure of his drive. The Grand Concourse connecting Manhattan with Bronx Park is the finest of these parkways. Pelham Parkway connects Pelham Bay and Van Cortlandt Park. The Interborough Parkway is planned to run from Forest Park in Queens to Brooklyn. Prospect Park and Cypress Hills are joined by Eastern Parkway. The most beautiful drive in the city is Riverside Drive, which affords a beautiful view of the Hudson River. Much of this drive is lined with trees which add to its beauty. Many of the finest memorials in New York, such as the Soldiers' and Sailors' Monument, Joan of Arc, and Grant's Tomb, are to be seen on Riverside Drive.



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Storm King Highway near Bear Mountain Park.

Too Few Parks.—The same men who planned the layout of the streets in 1807 also made the mistake of not providing enough small parks. They thought enough fresh air would come from the open sea and the rivers on either side of the island. They little dreamed of the densely populated areas in New York to-day. It is little wonder, however, that men who thought the only way to live was in one-family houses with plenty of space would ever think of the tenements and apartments housing dozens of families in the same building. Our best plans to-day may appear crude to the New Yorker of 2025. Those men of the early days thought it would be centuries before houses would cover the space north of "Harlem Flat." What do we know of the city of one hundred years hence?

Transit Questions.—It was not many years ago that the width of

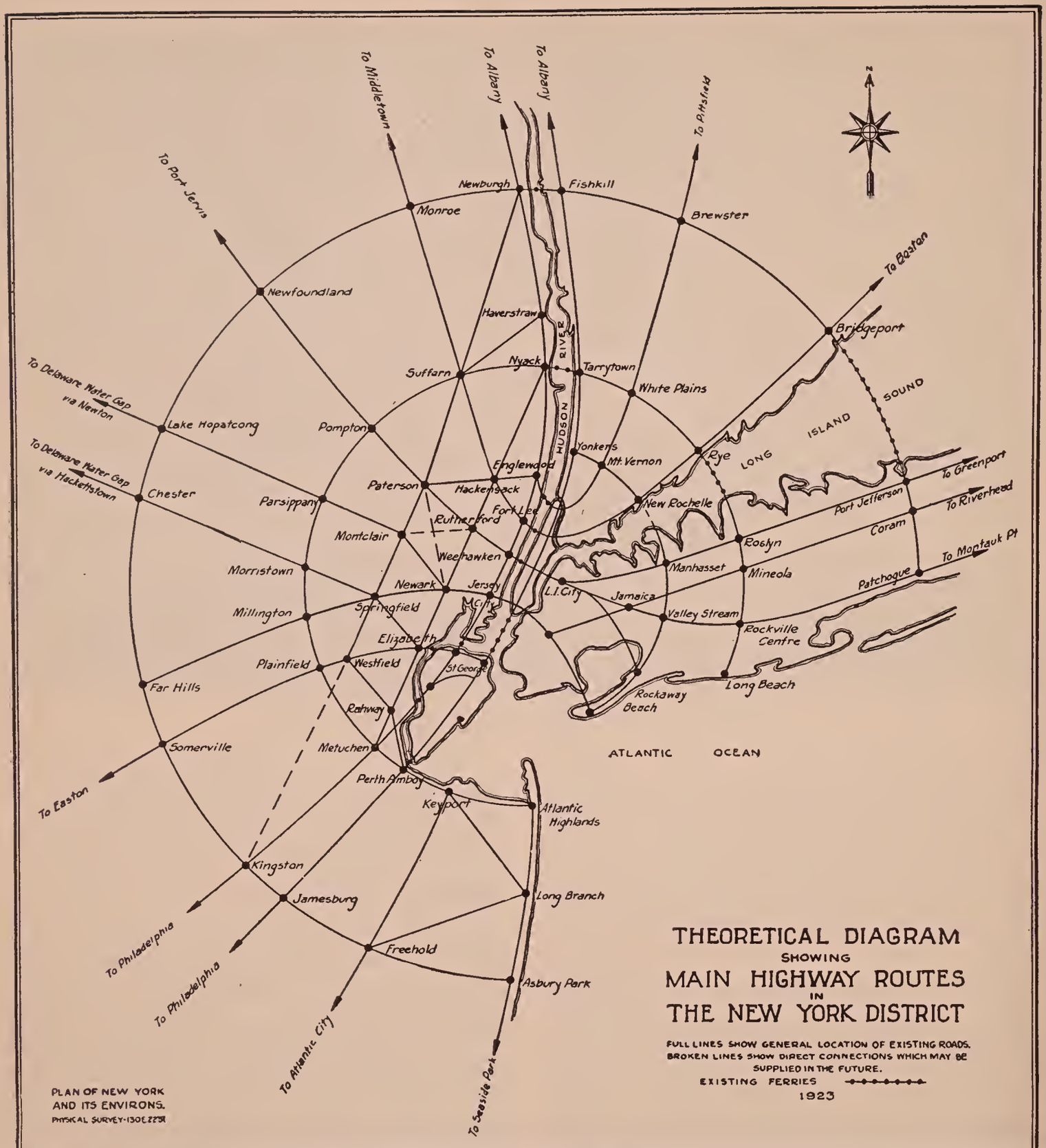
the sidewalks in the busy sections of the city was fixed. On any busy day people are crowded from the walks on to the pavements by the great crowds of people. Something must be done about providing space for pedestrians. A building like the Woolworth Building has room for so many people that when they leave for home in the afternoon, they crowd the streets, cars, and subways. The large theaters are nearly all in one section of the city. Most theaters open and close at the same time. The vast numbers who attend these theaters must have some way to reach their homes.

The movement of theater-going crowds is only one of the many that make the problem of better transit facilities the most important question before the authorities of New York to-day. This problem not only concerns the city of New York, however. It concerns the whole metropolitan district.

The many routes of passenger travel from the suburban areas to the city of New York are always crowded. In 1923 there was a total of one hundred forty-six million commuters who, during the year, went back and forth from suburban homes to the city. Thousands of others visited New York each day. Even though a total of 2,440 trains arrive at the terminal stations in New York each day, the service is not satisfactory either as to quality or quantity.

The railroad lines having terminals in or near the City of New York are as follows: Long Island Railroad; New York Central; New York, New Haven, and Hartford; New York, Westchester, and Boston; Baltimore and Ohio; Central Railroad of New Jersey; Delaware, Lackawanna, and Western; Erie; Pennsylvania; Lehigh Valley; and West Shore. Seven other railroads connect with different ones of these lines in the New Jersey section.

One plan that has been proposed to help the suburban travelers is the building of three two- or four-track railroad lines into the New Jersey, the Westchester, and the Long Island sections respectively. These lines could be constructed so as to form a loop around the city so passengers could reach many points easily where at present they have to make a trip to the center of the city and make several changes. Terminal stations may be built in the right



Courtesy of the Russell Sage Foundation.

places to best care for the passengers.

The average fare paid by commuters is thirty-five cents each way. It is estimated that the new plan might reduce this fare to ten cents. If this should ever happen, no doubt thousands of New York dwellers to-day would move to the suburbs where they could enjoy the roominess that the suburban home affords. Any plan that will help the workers in offices, stores, and factories to get a home away from the noises and confusion of the city would be welcomed by thousands of home seekers. The boy or girl who has always played on a cement pavement would think a roomy lawn a bit of paradise.

There are many plans proposed for relieving traffic trouble in the city itself.

Super streets with two levels, one for trucks, another for passenger cars, has been suggested. Moving sidewalks have been talked of for some sections where there is a heavy pedestrian traffic. Some of the elevated lines have already been removed and, no doubt, within a few years most of such lines will be cleared from the streets to make more room for street traffic. Where such lines have been removed, the streets have immediately improved. Property prices have risen and old structures have been replaced with new ones. It is thought that Sixth Avenue in Manhattan cleared of elevated structures will become a second Fifth Avenue in appearance.

More subways are needed, and a campaign is on at present to build such lines as may be needed to relieve the jammed stations and cars of the present lines.

Plans for Improving the Harbor.— As you have already learned, New York Bay and the miles of water front in the metropolitan district has been extensively improved. Much more remains for the future, however. There is room for the construction of many more docks and piers in all the boroughs and on the New Jersey side of the bay and river. The improvement of the Staten Island waterfront is only well started. The future, no doubt, will see miles of docking space in that borough filled with vessels busily loading and taking in cargoes.

The Port of Newark is, too, a project that must look to the future for completion. No doubt the Hackensack and Passaic rivers

will be dredged and made navigable for large vessels several miles inland within a few years.

The Port Authority.—The improvement of the port of New York has been placed in the hands of the New York Port Authority.

This is a commission consisting of six men—three from New York State and three from New Jersey. Both states are represented because it is recognized that the improvement of the port is an affair that concerns both states.

The Port Authority has to deal with a problem so large that it would be difficult to deal with it completely in a book of this size. The Hudson River is not deep enough in all places in the port to accommodate the largest ocean-going vessels. It is proposed that this river be dredged in such places as is necessary to give more docking space for the larger vessels. The outlets to Jamaica and Newark Bay are too shallow to permit the type of shipping that should use these waterways. They must be dredged also. Many bridges over the rivers that flow into the bay are so low that they interfere with shipping. Some of these bridges should be removed.

The commission proposes to connect Staten Island to the mainland by two bridges crossing the Arthur Kill between Howland Hook on Staten Island and Elizabeth, New Jersey, and between Tottenville and Perth Amboy, New Jersey. A Hudson River bridge at Fort Lee and One Hundred and Seventy-eighth Street, New York, is also planned. A bridge is so much more convenient than a ferry that there is no doubt that the first two bridges would soon bring a large population to Staten Island. The Hudson River bridge would bring New York City and the towns in New Jersey on the Palisades much closer together. It would also provide a way to truck foodstuffs into New York from New Jersey.

Several plans are being worked out to handle the immense quantity of freight that is constantly arriving at the terminals around the city, particularly in New Jersey. At the present time it costs as much to move many foodstuffs from the New Jersey terminals as it costs to bring vegetables and other foods from far western states. It is hoped that a belt line will be built entirely surrounding the port. This line will pass through many of the larger cities

and will be a great help in delivering freight to these cities without its going to the terminal stations, and then being reshipped either by train or truck as at present. Another inner line will make it easier to transfer cars from one rail to other lines. A line along the waterfront is planned to aid in transferring freight from piers and cars without the necessity of storage in yards.

In order to do away with so much trucking, with the long waits as at present, it is planned to build great terminal stations in Manhattan and transfer freight in trucks directly from cars which are to be unloaded at stations in New Jersey convenient for all railroads. The freight can then be easily hauled to the dealers in New York from the Manhattan stations.

It is hoped that all the carfloats, lighters, barges, and ferries operated by the various railroads may be directed by one head so as to lighten the cost of moving freight on the harbor waters.

There are many other questions of transportation around the harbor that the Port Authority will have to deal with. For example, a vast amount of freight enters the area around New York by truck. The proper routing of these trucks is a problem. It is not practical for a constant stream of heavily laden trucks to pass through the main streets of a city like Newark. Something must be done to change this condition.

The commissioners of the Port Authority are making a complete survey of the whole metropolitan area, and as time goes on they will be able to work out solutions for many of the problems that have arisen.

Plans for "Greater" New York.— Another commission that is working on plans that will help the whole metropolitan district to be a better place to live in is the "Committee on a Regional Plan for New York and its Environs." This committee works under the direction of the Russell Sage Foundation.

The area being studied by this committee is very extensive. From past experiences it is known that there will be a continual growth in trade and population in the section which is so favorably located. It is estimated that by the year 2000 the population of the area will be about thirty-six millions. This is slightly more than the estimated popula-

tion of all the states west of the Mississippi River in 1925.

Because of the many changes that will take place in enlarging the city itself and the surrounding area in order to care for this vast population, the committee mentioned above was formed. It is better to look ahead and be ready with suggestions than to wait until the problems become too serious for easy settlement.

With this thought before it, the committee has undertaken a survey or study of the business and industry in the region, particularly of how the industries have moved in order to get the best location for carrying their business. A study has been made of living conditions. Zoning and city planning has also been considered. The traffic and communication questions already discussed in various places in this book have been investigated. In connection with all this work a great many charts and maps have been made. Some of these have been used in various places in this book. As you look at them think of how they form a part of the plan to make the metropolitan area a better place for the people of the future to work and live in.

Plans for More Water.—Easy access to a good water supply has already been spoken of as a necessity of a great center of population. At present New York City is supplied with plenty of water from the Croton and Catskill systems. In New Jersey the Wanaque system will add enough to the present supply to provide water for years to come. There will come a time, however, when more water will be needed. It is estimated by some engineers that New York may require more water within ten years than can be obtained from the present sources in New York and New Jersey.

With the prospects of a water famine ahead, a tri-state commission has been formed with men from New Jersey, New York, and Pennsylvania as members. This commission has studied the Delaware River watershed and has prepared a treaty by which the three states agree to work together on the plan to turn this watershed into a source of water for cities of the three states. This plan, if worked out to completion, will provide, as one writer says, "water for millions to drink; power to drive mighty industries; health for teeming communities; and

channels for commerce.''[1] A vast sum of money will be required for this project, but the growth of the metropolitan district will depend upon its completion.

Building Never Ends.—Not only is the improvement of the port and the suburban area a part of the work of future citizens of New York, but the actual building of the city itself is largely a work of the future. There will never come a time when the city of New York and the cities around it will be finished. No doubt some of our proudest structures to-day will be torn down within a few years to give space for greater and more beautiful buildings. The interesting thing to be noted in the buildings of to-day as compared with the older structures is that there is more of an attempt at the beautiful than formerly. Look for this in the newer structures.

The Zoning Law which regulates the heights of buildings, and also districts the city into sections in which only certain types of buildings may be constructed, will do much toward making the city more beautiful as well as more agreeable to live and work in. There are similar regulations in the larger cities outside of New York in the metropolitan area. By this law homes, churches, schools, and buildings of like character are given a certain section. Manufacturing plants are in another section of the city. In congested areas of narrow streets tall buildings that overshadow other structures cannot be built.

Centers of Interest.—In New York there are many centers around which certain businesses are gathered. Wall Street is the banking area. The buildings are largely of the type that are necessary to carry on the affairs of banking, brokerage, and exchange. Around the City Hall is the civic center. Several large department stores and hotels are in the neighborhood of Thirty-third Street and Broadway. Times Square is the amusement center. The principal railway stations have already been mentioned as well as the universities, libraries, and museums and parks.

There is no particular commercial center in New York. The whole city is a hive of industry. The one street that possesses the most beautiful shops and stores is

[1] New York *Times*, February 1, 1925.

Brown Bros.

Soldiers' and Sailors' monument, Riverside Drive, New York City.

Fifth Avenue. Even this avenue is the scene of constant change. New structures are under way all the time to accommodate the host of shoppers who look to this street as the home of the finest merchandise to be had.

Memorials in the City.—Scattered throughout the city are many monuments and memorials of various kinds. These range from bronze plates on buildings to the great tomb erected on Riverside Drive in memory of Ulysses S. Grant. Some of these memorials are very beautiful and well placed to display their own beauty, also to add to the charm of their surroundings. Others are only fair and are not carefully placed.

One of the most famous monuments outside of New York City is the bronze statue of Abraham Lincoln by Gutzon Borglum in the Court House Park in Newark, New Jersey.

Shade Trees.—A word should be said about trees in the city. It is estimated that there are a million or more trees in New York City.

Brown Bros.

Grant's Tomb on Riverside Drive, New York City.

In the suburban cities there are a great many trees. Some of the residential towns have the appearance of forests when viewed from a height in the summer. It may be impossible to have trees in a busy down-town street. In home sections there can be trees, however. It should be every city dweller's duty to plant trees wherever possible and protect those that are already growing on the streets and in the parks.

The City Beautiful.—It is to be regretted that nearly all of our cities in America lack a good plan. They have grown so rapidly that the idea of city planning has only come when conditions have reached such a bad state that very little could be done to change layouts of streets or the character of buildings in many of the principal streets. Let us hope that the "City Beautiful" may ever be in the minds of the city builders of the future. In parts of the cities that are yet to be built may there be wide streets, roomy sidewalks, many parks, beautiful buildings, well-placed public memorials, and shade trees and wide lawns in front of the homes; in short, may the city be a place where living is a pleasure.

Questions

I. There are many crooked streets in the old parts of cities. Why?

II. What are the advantages of fine parkways in a city?

III. Some people prefer to live in the country, others in the city. Give arguments that each might use to support his judgment.

IV. What is meant by improving the water front?

V. How has automobile bus travel helped suburban towns?

VI. The problems of life in New York City are increasing every day. Explain.

VII. What are some of the things that add to the beauty of New York City?

APPENDIX I

Leading Dates in History of Metropolitan District

1609 Henry Hudson discovered the Hudson River.

1618 Farmers settled in what is now Hudson and Bergen Counties, N. J.

1626 First Permanent Settlement in New Netherlands or Manhattan Island.

1626 Manhattan Island purchased from the Indians by Peter Minuit.

1633 First wooden church erected in New York at 39 Pearl Street.

1642 First tavern or public meeting place was built on the site of 73 Pearl Street.

1653 A "waal" was built along what is now Wall Street.

1648 First fire warden appointed in New Amsterdam "to inspect the chimneys between the fort and freshwater pond."

1657 First street was paved in New Amsterdam.

1664 New Amsterdam taken by the British.

1664 King Charles II of England granted all the Dutch land in America to the Duke of York. The name of New Amsterdam changed to New York.

1664 Elizabethtown (Elizabeth), N. J., settled.

1665 Thomas Willett of Plymouth appointed first mayor of New York.

1666 Newark founded by Robert Treat.

1673 New York captured by the Dutch and renamed New Orange.

1674 New Orange ceded to England and renamed New York.

1683 New York was first divided into wards (six).

1693 The first printing press set up in New York by William Bradford.

1700 A City Hall was completed at Broad and Wall Streets. (New Federal Hall.)

1754 First city library was founded in New York.

1756 A stage route was started between New York and Philadelphia taking "three days through only."

1762 The streets of New York were first lighted at public expense.

1770 British soldiers destroyed Liberty Pole on the site of Park Row Post Office.

1776 Declaration of Independence was read to American troops quartered in New York.

1776 British captured New York City.

1776 Captain Nathan Hale executed as a spy by the British.

1776 Washington's famous retreat across New Jersey.

1783 British troops left the city of New York. (Evacuation Day.)

1792 Alexander Hamilton selected Passaic Falls as a site of a "City of Mills" (Paterson).

1795 First newspaper was established in New York.

1803 Corner stone of present New York City Hall was laid.

1807 Trial trip of the *Clermont,* Robert Fulton's steamboat.

1830 A stage line was opened between Bowling Green and Bleecker Street.
1832 First horse railroad in the world started on Fourth Avenue, New York.
1835 First gas pipes laid in New York.
1836 Morris Canal opened in New Jersey.
1839 John Ryle (Father of the Silk Industry) began manufacturing silk in Paterson, N. J.
1846 First telegraph line between New York and Philadelphia opened.
1858 First message by Atlantic Cable was received in New York.
1865 First paid fire department in New York was organized.
1867 A single-track elevated railroad began operations from Battery Place to 13th Street.
1874 Morrisania, West Farms, and Kingsbridge annexed to New York City.
1883 First bridge (Brooklyn Bridge) to span the East River opened.
1886 Statue of Liberty unveiled.
1895 Westchester, Eastchester, Pelham, and Wakefield annexed to New York City.
1898 The greater city of New York formed by annexing the city of Brooklyn, all of Staten Island, and Queens County.
1900 Excavation started for first subway in New York City.
1907 Work commenced on Catskill Water Works.
1908 Hudson River tunnel to Jersey City opened.
1909 The Hudson Fulton Exposition.
1917 The parade of the 27th Division before sailing for France.
1919 The reception to General Pershing at the close of the World War.
1923 The Twenty-fifth Anniversary of the Greater City.

APPENDIX II

Population of New York City With Its Suburbs

(U. S. Census Figures as of Jan. 1, 1920) Civil Divisions Comprised Within Metropolitan District and Territory Adjacent Thereto.

Metropolitan District (in New York)

Bronx County (Borough of The Bronx)	732,106
Kings County (Borough of Brooklyn)	2,018,356
Nassau County—	
Cedarhurst	2,838
East Rockaway	2,005
Farmingdale	2,091
Floral Park	2,097
Freeport	8,599
Garden City	2,420
Glen Cove	8,664
Great Neck	339
Hempstead	39,381
Lawrence	2,861
Long Beach	282
Lynbrook	4,371
Mineola	3,016
North Hempstead	21,795
Oyster Bay	16,097

Plandome	319
Rockville Center	6,262
Saddle Rock	71
Sands Point	284
Sea Cliff	2,108
Woodsburgh	220
New York County (Borough of Manhattan)	2,284,103
Queens County (Borough of Queens)	469,042
Richmond County (Borough of Richmond)	116,531
Westchester County—	
Ardsley	730
Bronxville	3,055
Dobbs Ferry	4,401
Eastchester	2,808
Elmsford	1,535
Greenburg	3,181
Hastings	5,526
Irvington	2,701
Larchmont	2,468
Mamaroneck	8,368
Mount Vernon	42,726
New Rochelle	36,213
North Pelham	2,385
Pelham	1,056
Pelham Manor	1,754
Scarsdale	3,506
Tarrytown	5,807
Tuckahoe	3,509
White Plains	21,031
Yonkers	100,176

Metropolitan District (in New Jersey)

Bergen County—	
Alpine	350
Bergenfield	3,667
Bogota	3,906
Carlstadt	4,472
Cliffside Park	5,709
Closter	1,840
Cresskill	942
Delford	1,286
Demarest	654
Dumont	2,537
East Rutherford	5,463
Edgewater	3,530
Englewood	11,627
Englewood Cliffs	594
Fairview	4,882
Fort Lee	5,761
Hackensack	17,667
Harrington Park	627
Hasbrouck Heights	2,895
Haworth	748
Leonia	2,979
Little Ferry	2,715
Lodi	9,162
Lyndhurst	9,515
Moonachie	1,194
North Arlington	1,767
Northvale	827
Norwood	820
Old Tappan	404
Palisades	3,833
Palisades Park	2,633
Ridgefield	1,560
Ridgefield Park	8,575
Riverside	1,077
Rutherford	9,497
Teaneck	4,192
Tenafly	3,585
Terterboro	24
Wallington	5,715
Wood Ridge	1,923
Essex County—	
Belleville	15,660
Bloomfield	22,019
East Orange	50,710
Glen Ridge	4,620
Irvington	25,480
Montclair	28,810
Newark	414,524

Nutley	9,421
Orange City	33,268
South Orange	12,557
Hudson County—	
Bayonne	76,754
East Newark	3,057
Guttenberg	6,726
Harrison	15,721
Hoboken	68,166
Jersey City	298,103
Kearny	26,724
North Bergen	23,344
Secaucus	5,423
Union	20,651
Weehawken	14,485
West Hoboken	40,074
West New York	29,926
Middlesex County—	
East Brunswick	1,857
Helmetta	687
Highland Park	4,866
Metuchen	3,334
Milltown	2,573
Perth Amboy	41,707
Raritan	5,419
Roosevelt	11,047
Sayreville	7,181
South Amboy	7,897
South River	6,596
Spotswood	704
Woodbridge	13,423
Monmouth County—	
Atlantic Highlands	1,629
Highlands	1,731
Keansburg	1,321
Keyport	4,415
Matawan	3,766
Middletown	5,917
Raritan	1,659
Passaic County—	
Clifton	26,470
Little Falls	3,310
Passaic	63,841
Paterson	135,875
West Paterson	1,858
Union County—	
Clark	795
Cranford	6,001
Elizabeth	95,783
Garwood	2,084
Hillside	5,267
Kenilworth	1,312
Linden	8,368
Rahway	11,042
Roselle	5,737
Roselle Park	5,438
Union	3,962
Westfield	9,063
Adjacent Territory Outside Metropolitan District (in New York)	
Rockland County—	
Grand-View-on-Hudson	175
Nyack	4,444
Orangetown	6,266
Piermont	1,600
South Nyack	1,799
Westchester County—	
Harrison	5,006
Port Chester	16,573
Rye	6,211
Adjacent Territory Outside Metropolitan District (in New Jersey)	
Bergen County—	
East Paterson	2,441
Emerson	973
Garfield	19,381
Hillsdale	1,720
Maywood	1,618
Midland	2,203
Rivervale	583
Saddle River	2,845
Washington	194
Westwood	2,597

Essex County—	
Milburn	4,633
Middlesex County—	
Madison	1,808
New Brunswick	32,779
Monmouth County—	
Holmdel	1,100
Marlboro	1,710
Union County—	
Fanwood	724
Mountainside	493
Scotch Plains	2,343
Springfield	1,715

Summary

Metropolitan District	7,910,415
In city proper	5,620,048
Outside	2,290,367
City and Suburban Territory	8,034,349
Suburban Territory, detailed above	2,414,301

APPENDIX III

Museums in New York City

AMERICAN MUSEUM OF NATURAL HISTORY—77th St. between Columbus Ave. and Central Park West. Open, free, every day; weekdays, 9 A.M. to 5 P.M.; Sundays, 1 P.M. to 5 P.M.

AMERICAN NUMISMATIC SOCIETY—Broadway and 156th St. Open daily, 10 A.M. to 5 P.M. (except Mondays, 1 P.M. to 5 P.M.).

AQUARIUM—Battery Park. Open, free, every day; April-Sept., 9 A.M. to 5 P.M.; Oct.-March, 10 A.M. to 4 P.M.

BOTANIC GARDEN, BROOKLYN—Flatbush Ave. and Malbone St. (Empire Boulevard). Open daily, free.

BOTANIC GARDEN, N. Y.—Bronx Park, north of Pelham Parkway. Open daily, free.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES, CENTRAL MUSEUM—Eastern Parkway and Washington Ave. Open daily, weekdays, 9 A.M. to 5 P.M.; Sundays, 2 P.M. to 6 P.M. Free (except Mondays and Tuesdays, 25¢). Children's Museum, 185 Brooklyn Ave. Free. Open daily, 10 A.M. to 5 P.M.; Sundays, 2 P.M. to 5 P.M.

DYCKMAN HOUSE—Broadway and 204th St. Open daily, 10 A.M. to 5 P.M. (except Sundays and Mondays, 1 P.M. to 5 P.M.).

HISPANIC SOCIETY OF AMERICA—Museum and library, 156th St., west of Broadway. Open 9 A.M. to 5 P.M., except on chief holidays and in August.

JUMEL MANSION—(Washington's Headquarters)—Edgecomb Ave. and 160th St. Free. Open daily and Sunday, 9 A.M. to 5 P.M.

METROPOLITAN MUSEUM OF ART—Fifth Ave. and 80th-84th Sts. Open, 10 A.M. to 5 P.M. the year through, except Saturdays, Sundays, and holidays, when the closing hour will be 6 P.M. The opening hour on Sundays is 1 P.M. Free daily (except Mondays and Fridays, 25¢).

MUSEUM OF THE AMERICAN INDIAN, HEYE FOUNDATION—Broadway and 155th St. Free. Open daily,

10 A.M. to 5 P.M. (except Sundays and holidays, 1 P.M. to 5 P.M.).

NEW YORK HISTORICAL SOCIETY AND MUSEUM—Central Park West and 79th St. Open daily, 9 A.M. to 5 P.M.; Sundays, 2 P.M. to 5 P.M., except July-Aug.-Sept. Admission free. Closed during August, and on New Year's Day, July 4, and Christmas Day.

POE COTTAGE—Poe Park, Kingsbridge Road, and Grand Boulevard, Bronx. Open daily.

VAN CORTLANDT HOUSE—Van Cortlandt Park, Broadway and 242nd St., Bronx. Free (except Thursday, 25¢). Open daily, 10 A.M. to 5 P.M. (Sundays, 2 P.M. to 5 P.M.).

ZOO, BRONX—Bronx Park. Open daily, 10 A.M. to half hour before sunset. Free (except Mondays and Thursdays, 25¢).

ZOO, BROOKLYN—Prospect Park. Free. Open daily.

ZOO, CENTRAL PARK—Fifth Ave. and 63rd St. Free, daily.

APPENDIX IV

Some of the Great Buildings in the City of New York

ADAMS BUILDING—61 Broadway. 32 stories; 424 feet high.

ÆOLIAN BUILDING—34 W. 43rd St. 18 stories.

AMERICAN EXPRESS BUILDING—65 Broadway. 21 stories; 415 feet high.

AMERICAN SURETY BUILDING—100 Broadway, corner Pine St. 23 stories; 306 feet high.

AMERICAN TELEPHONE & TELEGRAPH BUILDING—195 Broadway.

BANKERS' TRUST—16 Wall St. 37 stories; 540 feet high.

BELNORD APARTMENTS—Broadway and 86th St. 12 stories high.

BOWLING GREEN BUILDING—5-11 Broadway. 19 stories high.

BROAD EXCHANGE BUILDING—115 Broadway. 20 stories; height, 277 feet.

BUSH TERMINAL INTERNATIONAL EXHIBIT BLDG.—132 W. 42nd St. 30 stories high.

CANADIAN PACIFIC BUILDING—342 Madison Ave.

CANDLER BUILDING—218-226 W. 42nd St. 25 stories; 341 feet high.

CAPITOL THEATER BUILDING—Broadway and 51st St.

CARNEGIE HALL—Seventh Avenue and 57th St.

CHAMBER OF COMMERCE—65 Liberty St.

CITY HALL—Facing City Hall Park in lower Manhattan, near Chambers St. and Broadway. Built of white marble and completed in 1812. The Mayor's room is on the first floor. Near this spot, in the presence of General George Washington, the Declaration of Independence was read to the American Army, July 9, 1776. The Governor's room contains paintings and relics of great value. Open to the public, 10 A.M. to 4 P.M.

CITY INVESTING BUILDING—165 Broadway. 33 stories; 490 feet high.

COLLEGE OF THE CITY OF NEW YORK—140th Street and Amsterdam Avenue.

CUNARD STEAMSHIP COMPANY BUILDING—25 Broadway.

EQUITABLE BUILDING—120 Broadway. 40 stories; 548 feet high.

FIFTH AVENUE BUILDING—200 Fifth Ave., corner 23rd St.

FLATIRON BUILDING—949 Broadway, corner 23rd St. 20 stories; 286 feet high. Said to be the world's first steel skyscraper.

GARMENT CENTER BUILDINGS—Seventh Ave., between 36th St. and 38th St. Group of 4 buildings, 17 to 24 stories high.

GRAND CENTRAL PALACE—Lexington Ave. and 46th St. 12 stories.

GRAND CENTRAL TERMINAL—On 42nd St., between Lexington and Madison Avenues.

HALL OF RECORDS—Center and Chamber Sts., and corner of Lafayette. An interesting and noteworthy municipal building where the deeds of Manhattan real estate are kept.

HANOVER BANK BUILDING—5 Nassau St., corner Pine St. 22 stories.

HIDE AND LEATHER BUILDING—100 Gold St. In 1921 considered the tallest concrete building in the country. 18 stories.

HUDSON TERMINAL BUILDING—30 and 50 Church St. 4000 offices; capacity, 10,000 tenants. The Arcade is a great glass-enclosed passageway with shops and booths.

MANHATTAN LIFE INSURANCE BUILDING—64-70 Broadway. 23 stories; 350 feet high. Constructed in 1893; at that time the tallest office structure in the world.

METROPOLITAN LIFE BUILDING—1 Madison Ave. 50 stories high; 700 feet in height.

MUNICIPAL BUILDING—560 feet high, with 42 stories.

MUTUAL LIFE INSURANCE BUILDING—32 Nassau St.

NEW YORK STOCK EXCHANGE BUILDING—13 Wall St.

PENNSYLVANIA TERMINAL BUILDING—370 Seventh Ave., 31st to 33rd Sts. over the Pennsylvania Railroad tracks.

PUBLIC LIBRARY—Fifth Ave. and 42nd St.

SINGER TOWER—149 Broadway, corner Liberty St. 612 feet high, 47 stories; 900 offices; housing 5,000 people. The Singer Tower when lighted at night can be seen for miles and is one of the sights of the city.

STANDARD OIL BUILDING—26 Broadway.

SUB-TREASURY—Wall St., corner of Nassau.

TIMES BUILDING—Times Square, Broadway and 42nd Street. 25 stories; 476 feet high.

WHITEHALL BUILDING—17 Battery Pl. 13 acres of floor space; 32 stories and 424 feet high.

WOOLWORTH BUILDING—233 Broadway, corner Barclay St. and Park Place; highest building in the world; 792 feet, 57 stories; cost $13,500,000; has 4,000 offices, 6,500 windows; 13,000 persons work in the building and 50,000 people pass in and out of the building every week day.

WORLD'S TOWER BUILDING—110 West 40th St. 30 stories; 335 feet high.

WURLITZER BUILDING—120 W. 42nd St.

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